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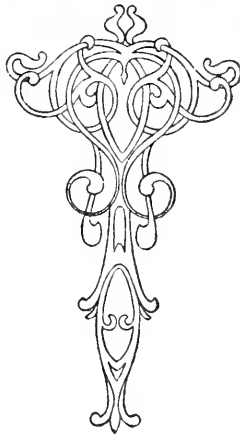


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Syracuse Chamber of Commerce

== REPORT OF THE ==  
Committee on Education

January  
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PUBLISHED BY THE  
SYRACUSE CHAMBER OF COMMERCE  
SYRACUSE, 1908



# SYRACUSE CHAMBER OF COMMERCE

## Report of the Committee on Education

JANUARY, 1908

### COMMITTEE

WILLIAM KENT, Chairman

A. B. BLODGETT

JOHN E. SWEET

DELMAR E. HAWKINS

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# Introduction

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The Committee on Education, appointed in the summer of 1907, at its first meeting discussed the question which of the great number of topics that might be treated in a report under the broad title of Education was best entitled at the present time to study and consideration by a Chamber of Commerce Committee. It was decided first, that there should be a brief presentation by Mr. Blodgett, Superintendent of Schools of Syracuse, of some of the most important facts concerning our city schools, for the general information of our citizens; second, that all questions relating to our state public school system as it now exists, our academies, colleges and universities, which are fully treated in the annual reports of the State Bureau and of the local Board of Education, and discussed every year in various conventions, be for the present at least passed by; and third, that the principal work of the Committee be the study of the most important question now before the educational world, viz: What is being done, and what should be done to provide for the education of the great mass of our future citizens who are leaving the schools at or under the age of 14 years? This question was discussed at length and it was then decided to divide the work of the Committee among its several members, so that each one should make a written report to the whole Committee on the particular phase of the question assigned to him. Mr. Blodgett was assigned the subject of the Public Schools of Syracuse; Professor Sweet, the Industrial School for training of machinists, with especial reference to the Artisan School in Syracuse, of which he is the founder; Professor Babcock, the Trade School for Women; Prof. Delmar E. Hawkins, formerly Professor of Political Economy in Syracuse University, Education in its Relation to Society at Large; and the Chairman of the Committee, Recent Educational Literature with Especial Reference to Industrial Education.

These separate reports having been read at a meeting of the Committee in their original forms, and discussed at length, it was concluded that the best report the Committee could make would be the presentation of each of these several reports, after suitable revision, under the name of its author. The Com-

mittee therefore presents these individual reports and asks that they be printed.

The Committee is unanimously of the opinion that the time has arrived when legislative action concerning industrial or trade education should be taken by New York State.

Germany is far in advance of the United States in the matter of industrial education. Massachusetts has taken the lead in the matter in the United States. Should not New York State follow the example of Massachusetts?

It is suggested that the method adopted by the State of Massachusetts in approaching this subject is the best one possible; that is, the appointment of a commission to make an investigation. If such a commission was appointed in New York State, it would not need to repeat the original work of investigation done by the Massachusetts commissions, but would only have to investigate the work which has been done in the other states in the promotion of industrial education, and to draw conclusions therefrom.

The Committee respectfully recommends to the Chamber of Commerce that it should petition the Legislature of New York State in proper form to appoint a committee on industrial education, whose duty it should be to investigate and report what legislation concerning the subject of industrial education has been adopted in other states, and also the results obtained from such legislation, and within one year after its appointment to report to the Legislature an act for the promotion of industrial education in the State of New York.

WILLIAM KENT,  
JOHN E. SWEET,  
A. D. BLODGETT,  
DELMAR E. HAWKINS,  
GEORGE D. BABCOCK,  
Committee.

The report of the Committee having been presented at a meeting of the Board of Directors of the Chamber of Commerce held on January 14th, 1908, and discussed by several members, the report was ordered to be printed and the following resolution was passed by a unanimous vote:

Resolved, That the report of the Committee on Education be approved, and that a communication be sent to the Governor of the State, the Commissioner of Education, and the members of the State Legislature from this County, urging that the State Legislature appoint a committee on industrial education, whose duty it shall be to investigate and report upon legis-

lation concerning this subject adopted in other states, the results obtained therefrom, and the needs of industrial education in this State, and within one year after its appointment to report to the Legislature an act for the promotion of industrial education in the State of New York; and that the Committee of Education of this Chamber be and is hereby made a special committee to do any and all acts necessary or proper to carry this resolution into effect.

# The Schools of Syracuse

By A. B. Blodgett, Superintendent of Schools

The public school system of the city of Syracuse comprises 39 school buildings. There was a total registration of 22,308 pupils during the school year ending June, 1907, with an average registration of 20,396. This small army receives instruction from 517 teachers, principals and supervisors.

Of the 39 buildings above mentioned, 34 are devoted to the elementary courses, one to manual training, two to High school work, one of which is a business and manual training High school; one is a special school for backward and overgrown pupils, and one a Truant school.

There are 26 Kindergarten classes in as many different schools in which are employed 40 trained kindergarteners.

The growth of the schools as to pupils and teachers from 1900 to 1907 is best presented in the following way:

Total registration:	High School			
	Pupils.	Teachers.	Pupils.	Teachers.
1900 .....	20,761	474	1,623	43
1907 .....	22,308	516	2,312	69

You will notice the remarkable growth of 42.5 per cent. in High school registration in seven years, while the growth in total registration has been only 7.4 per cent. in the same period. Of the above increase in High school attendance, boys have furnished 56 per cent. and girls 44 per cent. This is a strong indication that more and more the boys are giving attention to High school work, and this is further evidenced by the registration at the Business High school where the number of boys and girls is practically the same.

The rate at which children leave school at an early age is shown by the following table:

Number of pupils of age from 13 to 18 years in the Syracuse Public Schools in 1907.

Ave. Age.	No. of Pupils.	Per ct. of No. at 13 yrs.
13 .....	1,970	100
14 .....	1,580	80.2
15 .....	1,024	52.0
16 .....	566	28.7
17 .....	366	18.6
18 .....	177	9.0

## **Course of Study.**

The course of study is complete from kindergarten to high school inclusive, and is divided as follows: One year in the kindergarten, eight years in elementary or grammar schools and four years in the high schools. Kindergarten pupils may enter at 4 years of age but the majority enter at 5. If pupils progress without loss of grade, graduation from the high school would occur at 17 years of age. But the loss of one year in time on the average is unavoidable. This cannot however be considered actual loss in the proper advancement and development of the child.

Kindergartens, Sloyd and Domestic Science received their initiative as a part of the public school course of study, as they usually have in every city, through the aid of several philanthropic citizens. The Solvay Guild and the Women's Educational and Industrial Union were the pioneers. Their efforts were seconded by Mr. A. C. Chase, who, in 1896 fitted up the first kitchen in one of our schools at his own expense. Sloyd and sewing immediately followed, and to-day we have six centers for manual training and six centers for cooking. To these centers come the pupils of ten of our largest grammar schools. The sewing is carried on in the regular school rooms and no special equipment is required.

Thus we have in somewhat full measure the foundations, the essentials of a course of study that should meet the needs of boys and girls up to the age of 14 years. But what shall we say of that particularly dangerous age of 14 to 16 years, when boys particularly are unsettled as to what their future is to be? Without something definite and of a live interest they begin to float and for two or three years danger and uncertainty is their environment. This is the school problem of the hour, and educators are giving more time and study to these years of school life than to all others combined.

## **Future Needs.**

Our city schools need a fuller and more elastic development of manual training and domestic science to cover the 6th, 7th and 8th years of our grammar schools, and a continuation of the same in the most interesting way to catch and hold the 14 to 16-year-old boys above mentioned who are prepared for high school work.

In the Business High school, manual training is gaining in strength and popularity. A Supervisor has been elected to begin his duties January 1, 1908, and with the inauguration of this work in our south side High school and a proper unifi-

cation of the work in both grammar and high school courses we shall be ready for a decided advance towards a line of industrial instruction leading to the trades.

At the same time something must be done for the girls, and this will of necessity be one of our future problems. A continuation in more advanced lines of our present work at domestic science may be its solution, at least this field is a proper matter for consideration.

### **Special Schools or Classes.**

We have one special school whose specific work is to give overgrown and belated children an opportunity to advance more rapidly than they could in the regular grades. It is confined to pupils of the upper grades and has been the means of keeping many pupils in school who would have left their regular classes because of size or backwardness as compared with other pupils. An extension of this work is desirable and is under consideration.

### **Defective and Subnormal Children.**

It is a safe proposition to assume that the State or City owes to every child of school age all the education and training he is capable of accepting or acquiring, and this implies at once the necessity of better equipment and instruction for defectives and cripples.

How to reach the parents of subnormal children is a delicate matter. To supply the best methods of training for such children is an interesting problem. Yet it should be done, and unquestionably it comes within the province of the public schools to take up the work with such children as are not sufficiently defective to be confined to institutions.

### **Cripples.**

A school for crippled children should be maintained at public expense and transportation provided when necessary.

### **Medical Inspection.**

Our Board of Health has entered upon a close and thorough medical inspection of the schols both as to sanitation of buildings and daily examination of the pupils for contagious and infectious diseases. It is a splendid work, not the least noticeable and beneficial effects being the more cleanly and wholesome appearance and condition of the children, and also a decided improvement in hundreds of homes.

But there is another important field, viz., that of the eye and the ear. It is much more difficult to detect and remedy this class of defections, but it should be done even to the employing of experts to carry it on. Hundreds of boys and girls never reach the maximum of their powers—in fact go wrong—through defective vision or hearing, and parents, teachers, the afflicted themselves, never know the real cause. The result is sometimes termed “Arrested development,” but in no sense is it true. It is simply eye or ear trouble, or both, and these can be remedied if ascertained in time and rightly treated.

### **High Schools.**

The new High school recently occupied has a maximum capacity of 1,500 pupils. The North Side High school, to be ready a year hence, will have a capacity of 750, making a total of 2,250. No school building whose attendance is more than 80 per cent. of its maximum capacity can be wisely and properly administered, and no principal can meet the full demands of more than 1,000 pupils if he is to do what ought to be done for them individually. Eighty per cent. of 2,250 would call for accommodations for 1,800 students and as we have had already over 2,000 in regular attendance at one time, it will be seen that more high school accommodations must be provided at no distant day. The proper location of a new building would be in the near vicinity, probably to the north, of Burnet Park.

### **Needs.**

The most pressing needs for the public school system of this city are: An extension of manual training and domestic science along lines indicated; classes for defective and crippled children; future provision for High school students, and a close study of the conditions and the remedies for the floaters and the uncertain youth of the city.

# The Industrial School

By John E. Sweet

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From the number of letters received from all over the country asking about the plan and progress of our Artisan school, there can be no question but that there is a widespread feeling, among the manufacturers at least, that there is a sort of instruction or training needed that our training, trade, military or technical schools, colleges and universities do not supply; and that is the training of men of ordinary intelligence how to work, that they may be able not only to earn a living but to do the work that needs to be done.

The training that is needed is a substitute for the old apprentice system, which has died out because the manufacturers of to-day can not afford to have apprentices. The investment required per boy renders it impracticable to get work enough from the boys to make it profitable.

The belief is pretty general that there is a lack, and a fast growing lack, of good mechanics. There is a general feeling that far too many of our young men are drifting into idleness and worse. Statistics show that but a small percentage of those who learn trades end their lives in penal institutions. This is in itself enough to justify some movement in the direction of the establishment of schools of trades.

Mr. Van Cleave, the President of the Manufacturers' Association, advocates the beginning of industrial training in the public schools at the age of ten or twelve years. This will call for a great addition to the cost of equipping and running the schools, and while it will be no detriment to any one to learn to use his hands, it will be adding another to the present overburden of studies imposed on the pupils of the grade schools; although the addition of hand work for short periods is so like play that no study taking the same length of time could be added that would add so little to the burdens as manual training.

As it requires about twice the room for each child to do hand work that it does for book work, the additional room and the cost of tools and materials would be so great than the additional taxes for school purposes that Mr. Van Cleave's scheme would require is likely to delay it for many years to come.



There are already many schools established with the primary object of furnishing places where boys can learn a trade, but these have almost invariably fallen into the hands of school teachers who soon drift into emphasizing the book part of the work, and the hand work becomes of secondary importance.

As an index of what is being done and attempted: The Pratt Institute of Brooklyn is perhaps the oldest, and one that gives more time to hand work than the technical colleges, but the course is shorter, and the graduates, while not full fledged workmen, perhaps because there is too little variety of work and too short time, are so well started that in the main they soon become good men.

The Brown & Sharpe Mfg. Co. and the Baldwin Locomotive Works, and others perhaps, have so many apprentices that they make special provisions to train them.

The cities of Springfield, Mass., and Milwaukee have trade schools as parts of their public school systems, something in the way of half-time schools. The manufacturers of Cincinnati have an arrangement with the University to have half-time apprentices. The State of Mississippi has a special school of trades. At Indianapolis the United States Government sold to a group of citizens the abandoned arsenal, which is being used as a school for various trades, to which in foundry work the members of the National Founders' Association contribute. The General Electric Co. and the Westinghouse Electric & Mfg. Co., have established schools of their own.

New York City has invested a million and a half in the Stuyvesant Industrial School for teaching in trades and art; and Mr. Carnegie has given several millions to establish such an institution in Pittsburg. A large amount of this money has been put into magnificent buildings.

The Williamson Trade School near Philadelphia, the New York Trade School and the Jewish School in New York City, and the School of Trades in Milwaukee come nearer making working mechanics than any of the others, though in many cases the graduates instead of following the trade, find places as teachers in other trade schools or in higher positions. The total number of pupils as yet attending all these schools is so small that they have yet done relatively little to supply the great demand for skillful workmen.

What all the manufacturers feel is needed is skillful workmen; men who can do things and know why, and the only way to get them is through schools where to teach them just these things is the objective point.

To say this is easy; to do it is a very different thing. To get the boys is difficult, because it is so hard to convince them and their parents that a trade to a boy who must earn his liv-

ing is as good as five or six thousands in money; and because so few parents are willing to believe their boys are not born to be Presidents of the United States.

Another trouble is to get the instructors or to learn what kind of a man is required for an instructor.

The problem is a complicated one, and what we are doing at the Artisan school is trying the experiment.

In the Winona school at Indianapolis, where they are striving the hardest to establish schools of trades, they are, it is understood, somewhat troubled in getting students. They have not gone far in the machinist trade, which is the hardest to establish and by far the most expensive, as the outfit is extensive per boy and the cost of material is excessive compared to such industries as plumbing and foundry work, where the material can be worked over and over and involve little loss.

At the Artisan school the money paid in is about \$26,000, of which about \$21,000 has been invested in real estate and tools; and the present plan will suffice for a dozen or more boys, or at the rate of \$1,750 per boy. And \$5,000 more will equip tools enough to accommodate twenty boys, or \$1,300 per boy; and it is doubtful if the limit of fifty boys was reached that the investment could be brought to less than \$1,000 each.

In the pattern makers' and Machinists' trades the product must be good enough to sell in the open market or to use in the shop, or if not the loss will be too great.

The Artisan school has succeeded in making useful and salable goods with very little loss, but it is slow work; and while a part of the time the product has brought perhaps one-quarter the cost of running expenses, if at the end of the three years' course it is able to meet running expense it will be an achievement.

One thing which confronts us is this: While at the technical schools they have the pick of the boys, and the examples of the work they show is the pick of the picked, the schools of trades must be exactly what they are intended for, not the pick of the boys, but average boys who by practical training may be developed into skilled workmen.

The first thing that confronted us and will confront others was to get the money to start with. The next is to get the boys; this to begin with means that we must convince them of the value of a trade and that we are going to give them chance to learn it.

Then comes the question of keeping the boys after we have secured them. This will either involve us in the possibility of inspiring them with pride in their work or else we must pay them for it, which will be a donation, for it is not possible to

make the school more than self-supporting if nothing is paid the boys.

We must build up the reputation of the school by turning out work of unquestionable quality. To teach the boys to do good work, we must do good work, which too, is the only way to inspire them with pride in doing it. Later we must turn out mechanics who can do good work in good time—and this question of time may be the hardest problem in the lot, but we have not come to that yet.

The large industries like the General Electric Co., the Baldwin Locomotive Works, etc., who have established apprentice schools, have advantages that make their enterprises successful; but they train boys for themselves and for their specialties, which gives us no precedent to follow.

The men should not only know how to do all kinds of work, but to do it in the best way, and that involves to a certain extent the why; and this borders on the technology, which must be given as the work goes on and not as a special study.

The school established to turn out accomplished workmen must turn out accomplished workmen and nothing else or it will fail in its purpose. To turn out teachers for other schools would be as much a failure as to turn out indifferent workmen.

The boy must want to work, must want to learn to make things, and he must take pride in the things he makes.

The boy who learns to do honest work is quite likely to become an honest man; and we must train them to do right by doing right by them, and teach them morality by example.

# **The New York State Trades School for Girls.**

**By George D. Babcock**

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The New York State Trades School for Girls was established in Syracuse in January, 1906, by the Women's Educational and Industrial Union of Syracuse, as the result of action taken by the State Federation of Women's Clubs at its meeting in Binghamton, N. Y., in November, 1905. The Women's Union at that time possessed a house on Montgomery Street which was free from incumbrance, and the State Federation turned over to the Women's Union the sum of \$5,000 for the purpose of assisting them to reorganize under the name of the New York State Trade School for Girls and to provide equipment for such a school.

It was the belief of the founders of the school project that if a working example could be shown of such a school in operation, its value to the State would become so apparent that the trade school idea would eventually become spread throughout the State. This was the object in naming the institution the "New York State Trade School for Girls," even though it still maintained almost a purely local character.

After reorganizing in 1906, the New York Trade School for Girls set to work to improve the building on Montgomery Street. This had been barely completed and the school started when the building collapsed in the spring of 1907, on account of faulty operations by an irresponsible contractor, which caused the foundations to give way and the building to collapse. An old residence on East Onondaga Street was then rented and the school started again.

The fall of the building on Montgomery Street was a great loss, but the members of the association at once set to work to raise sufficient money to meet expenses, with the hope of rebuilding at some future time. The chief means of raising money are three: Membership dues, subscriptions, and an annual charity ball. In addition to this, the association has \$2,000 in bank and the membership dues for this year which have not yet been reported on. The school still owns the lot on Montgomery Street, valued at about \$17,000, on which is a mort-

gage of \$8,000. It is the general sentiment of the association that the school should be rebuilt on a less valuable piece of property.

Mrs. George F. Hadley is President of the association; Mrs. Caleb C. Brown, Secretary, and Mrs. John J. Phillips, Treasurer.

The school takes girls from grammar schools who are unable to go on with their high school work, and girls from the high school who wish to fit themselves for the following trades: Dressmaking, shirt waist making, millinery, plain sewing, embroidery, cookery, housework, care of children. The Trade School does not try to support them, but gives their education free.

The school was a great success from the first, 325 pupils having been then enrolled. At present there are 104 pupils. It has been very fortunate in securing good positions for its graduates. The complete course occupies eight months.

It is suggested that the Chamber of Commerce interest itself in assisting the Trade School for Girls to obtain legislative action allowing it an annual appropriation. Such an appropriation would make it possible to put up a building suitable for the needs of the school and to educate a greater number of girls in the domestic and other trades. It would also encourage the establishment of school of like character in other parts of the State.

# Education and Democracy

By Delmar E. Hawkins

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## What is Education?

Agreement as to definition is three-fourths of the argument. With the definition of education settled, the educational problem becomes comparatively simple. Professional educators might contend as to particular processes, but that difficulty is of minor importance, for with the essence or purpose of education given, the appropriate methods will readily suggest themselves. There is a definition of education, so clear, so simple, as to be self-evident, a mere truism, viz: *Education is preparation for the duties of life.* Apply that definition to any age, country, social class, or to any quality or grade of individual capacity; it will invariably point to the system or process best adapted to the case. Times, conditions, needs, indeed, change. Society is not stationary, but is ever in motion. All institutions among civilized people are under constant pressure of change, and must be modified to adapt themselves to the changing environment. There can be, therefore, no fixed or permanent educational form or mechanism; but there can be, and there is, a permanent educational ideal; and that is—to fit man for his life work; so to train, instruct, and discipline him, that he shall be qualified to live his life well, to perform successfully his particular duties, and to fill his place in the great plan which Providence has marked out for all men.

## The Fundamental Question.

The opportunities, interests, and duties of life are not the same for the modern boy or girl in Russia, Germany, England, China, America; not the same in the fifteenth century and the twentieth; not the same for the American boy of colonial days, of fifty years ago and of to-day. Consequently the educational system appropriate in each case will differ from that in every other. Yet the points of similarity are far greater than the points of difference; for after all, human life everywhere and always is much the same. Life before the American boy and girl in the populous industrial or commercial center is not

quite the same as in the small village or on the farm ; but here the points of similarity are still more numerous ; for Americans are all under one political and social system. There has been set up throughout this country a Democracy, in form at least, if not in fact. The primary educational question with us, therefore, is—not how shall we adjust the courses of the elementary and secondary schools and colleges ; what studies shall be added here or dropped there ; whether subjects shall be taught in this way or that way ; whether there shall be evening schools, vacation schools, manual training, commercial or industrial training ; whether, as disciplinary studies, Greek and Latin are as valuable as Mathematics or something else — these are not fundamental questions of educational policy, but rather, this : What is the life that confronts the average American boy and girl of to-day ? What must they be and do, in order to fulfill their proper destiny, and in order that this social structure erected upon the basic principle of liberty, equal opportunity, and justice, may not perish, and with it the aspirations and hopes of the world for generations to come ? That question brushes aside technicalities and quibbles, simplifies the matter, and reduces the problem to its lowest terms. Our educational machinery must produce the kind of young men and women that can meet the situation that confronts them ; not youth that stand at the threshold of life dazed, crippled, and discouraged, because filled with useless information ; or indifferent, because guaranteed an idle competence ; but who face the conditions of life confidently, because prepared, and resolutely, because impelled by stern necessity and by the sense of duty.

### **The Form of Democracy and the Reality.**

Democracy is the organic expression of high average intelligence and character. It is not a form or system imposed from without or from above or superimposed in any fashion, but rather a capacity and power that reside in the average citizen and is reflected, through his public activity, in a system of social justice. That real democracy does not exist in this country, and that the people are not now qualified to establish or maintain such a system, is apparent to every intelligent observer. But we have the political *form* of democracy, manhood suffrage and the legal right to complete political liberty. We are, consequently, under the necessity of speedily raising the average citizen to the plane of self-government, or we are likely to see the fabric of our institutions crumble under the strain of demagoguery and discontent ; for what limits are set to such forces, with universal suffrage and majority rule ?

## **Responsibility upon the Public School.**

Where does the burden of responsibility fall? Upon the Public School. It is there the whole issue rests. Give us an educational system that will produce a Democrat—not a man with vague notions or theories about liberty, but a self-reliant, self-governed man, knowing his relation to his fellows, and fitted to begin the work of a useful life—and there need be no fear for the future. We shall level up the American people to the requirements of our form of government. We shall establish true democracy. That is the only way we can establish it. Public education is the power we must invoke. The State must provide a system of elementary and secondary education free to all, and compulsory upon all. That system must be such in scope and method as will properly and reasonably qualify each member of society for the fundamental duties of citizenship. In other words, the educational system must meet all the demands of a democratic form of social organization. Its dominant purpose must be individual and social efficiency.

## **The Fundamental Duties of Citizenship.**

What are the fundamental duties of citizenship which individual and social efficiency demand? First—To uphold government and to promote law and order and justice. Second—To do honest labor, and by industry and thrift to support one's self and the dependent members of one's family, and to contribute one's rightful share to the maintenance of public institutions. Third—To possess health and strength of body, mind and character, in order to fulfill one's social obligations, as member of family and community. These are the political economic and social duties that rest upon every man and woman, and which, by early training, they should be prepared to meet.

## **Education That Qualifies.**

It is at once apparent that no system of education that aims solely to cultivate or discipline the mind, or to develop "a sound mind in a sound body"; or that teaches the "common branches" only; or that provides, solely, even a general cultural course, can give the required preparation. In addition to a minimum of the general or cultural course as now understood, which seeks to develop the intellectual forces and the esthetic sense, and in addition to physical training and instruction in the laws of health, there must be specific instruction in political knowledge, effective training in the industrial arts, and thorough indoctrination



in practical morals. Political efficiency, industrial efficiency, moral and physical efficiency; whatever else it may seek to accomplish, education, in a democracy, must yield the largest possible measure of these. The form of self-government without the knowledge and power of self-government leads to despotism. Industrial individualism, with its private initiative, private property, private business, and private responsibility—without the assurance to every citizen of the power to earn a living—is an economic paradox; it is the right and duty to earn a living, without the power or fitness. That leads to Socialism. Political and industrial democracy without the strength of manhood and character in its citizenship (if that were possible), would very soon collapse and fall to its natural low level.

### **State Function.**

The objection may be raised that it is not the function of the State to provide trades or professions. In reply it may be said that State function is not a matter of *a priori* reasoning, but of practical necessity. It is the function of the State to do whatever is necessary for its welfare, providing the same would not or should not be done by private action. If instruction in the industrial or domestic arts, in commercial or business knowledge—the indispensable equipment of the great mass of people for earning honest living and leading useful lives—if this is not or cannot be given through private means—and we know that it is not and cannot be—then it is the business of the State to provide such training.

### **The Industrial Age Without Industrial Training.**

This is “the Industrial Age”; and yet no epoch of the world has left industrial training so completely to haphazard luck and chance. Slavery at least trained the young for their future work, and assured to each the opportunity to work. Serfdom did the same. But freedom, in releasing men from servitude and oppression, also threw them out upon their own resources. Machinery and steam power drove increasing millions of them from the land where a reasonably certain livelihood was obtainable, to crowded city and town, where irresponsible private interest, periodic oscillation of business, increasing tendency to centralization, the disintegration of trades through specialization or the division of labor, and the consequent disappearance of apprenticeship—where these have conspired not only to diminish the certainty of earning a living—but have all but reduced to anarchy the industrial instruction and training of the young. Private philanthropy is utterly inadequate to undertake the

work. Private business cannot afford to do it. Labor unions are utterly unable to cope with it. Either the State must assume the responsibility or it will not be done at all.

### **Superior Educational, Moral and Social Value in Industrial Training.**

It will be objected, also, that the young should not be indiscriminately forced into learning trades or business, thus predetermining the bent of their future careers which they alone should determine, and then only after each has been sufficiently developed to make for himself a proper choice.

Industrial education would not lessen or retard general intellectual development. It would not displace any other training of superior value. It would not restrict or unduly influence the choice of career, but rather, would enlarge and rationalize that choice. The study of nature's productive forces, and the methods of utilizing them; the study of the materials, tools, and processes of the industrial arts; learning how to do and to make useful and beautiful things that minister to the needs of mankind, and for which the world is willing to pay a price—these have not only a true educational value of the first order, but they have in addition practical economic, moral and social values of incalculable importance. The vast majority of the young are predetermined or destined for the industrial arts anyway. The very small minority who go into the professions would go there only after having the opportunity to discover that they are not better qualified by nature for industry or business. In any event, an alternative vocation would be useful to no small number of them.

### **American Public Education.**

If we accept the above theory of education, what shall be said of our present educational system in the United States?

That our public schools, in physical equipment, in ability and loyalty of teaching force and directing officials, and in generosity of public support, are the best in the world, there can be no doubt. But the point is this: Are they doing what should be required of them? Are they turning out the kind of product we need?

Education of the elementary and secondary, or common school grades, is mainly public and free. The private schools of this character are becoming less and less a factor. In 1904-5, of the total elementary enrollment, private constituted 7.23%; of the total secondary enrollment, 20.5%; or an average for both of 7.8%.

## **Is Education Universal and Compulsory?**

Nearly all the States have compulsory education laws, requiring school attendance of children from seven or eight to fourteen, fifteen or sixteen years of age, for a period of from eight to forty weeks a year. Most States also have child labor laws restricting or prohibiting the employment of children under the age of ten, twelve, fourteen or sixteen years—in certain occupations. The compulsory school age period is four years in one State (Md., outside of Baltimore City and Allegany Co.); six years in nine States (Ariz., Col., Idaho, Nev., N. H., N. Dak., R. I., S. Dak., W. Va.); seven years in eleven States (Ill., Ia., Ind., Kan., Ky., Mass., N.J., N.M., Vt., Wash., Wis.); eight years in eleven States (Cal., Conn., Minn., Mont., Mo., Me., (Md.—Baltimore City and Allegany Co.); Neb., N. Y., O., Ore., Utah); nine years in two States (Wyo., Mich.); ten years in one State (Pa.) The average compulsory school age period of all the States having compulsory laws is 7.2 years, of from 8 to 40 weeks each. However, the majority of the States have so conditioned their laws by permitting children of school age to work for the support of themselves or others; or by permitting those who can merely read and write, or who are attending night school, to be employed; or by excusing attendance on other grounds—that the actual average compulsory school age period does not exceed six years. New York State places the compulsory school age period at 8 years (8 to 16), and forbids employment in any service of children under 14. Children between 14 and 16 are forbidden employment unless they have attended school 130 days during the preceding year and are able to read and write and cipher; or, in first and second class cities, have completed the elementary course, or are attending evening school 16 weeks a year. So much for the laws.

### **Laws Inadequate and Uninforced.**

The above laws are not only inadequate, they are uninforced. Instead of a nominal seven and one-fifth years of from 8 to 40 weeks each, the compulsory school period should be not less than eleven full years, 7 to 18, a period long enough to complete the high school training. All employment in school hours during that period, except in extraordinary cases to be determined by responsible authority, should be forbidden. The State should then exact rigid enforcement of the law.

Seventy per cent. of the children of school age in the United States are enrolled in the public schools. (76% in both public and private schools.) Seventy per cent. of those enrolled are in average daily attendance. In other words, scarcely half the

population of school age (5 to 18) are in regular attendance in the public schools, while thirty per cent. are not even enrolled. In New York State about 70% are enrolled, and 76% of these are in regular attendance. In the city of Syracuse, the proportions are about 70% and 80%.

### **Education and Self-Government.**

Is our educational system qualifying our future citizens for self-government?

The total schooling of the average pupil enrolled in the public schools of the United States is about 5 1-3 years of 200 days each. That is, seventy per cent. of the young are getting an average of 5 1-3 years of schooling, while all of them should be getting eleven years. In other words, mathematically expressed, our population is getting but thirty-five per cent. of the schooling it requires. About 95 in 100 of those of elementary school age at some time go to the elementary schools; over three-quarters of them drop out before they have finished the course. About one in seven or eight of those of high school age attend high school; about one-third of them complete the course. About one in forty of college age attend college; about one-third complete the course. In other words, less than one-fourth of our future citizens are receiving a grammar school education; about one in thirty, a high school education; about one in 120, a college education. Does it appear from these facts that we are developing sufficient intelligence for self-government?

Moreover, for those who attend the elementary grades, what instruction is given in political knowledge? There is saluting the flag, singing of patriotic songs, and, perhaps, for a few of them, a glimpse at United States history. With the exception of a comparatively few progressive schools in some of the larger cities, there is no attempt at instruction in the principles, methods and ideals of democratic government, no specific preparation for political responsibility, even in the upper grades. Elementary education in Spain or Turkey or Russia might be the same. And yet 95% of our common school pupils and 90% of all pupils in all schools of every kind, private and public, are in elementary grades.

What practical instruction for self-government do the high schools give, for the one in seven or eight who enter them, one-half of whom drop out after the second year? For the one-half who drop out, nothing; of the one-half that remain, perhaps 50% of them study American history; and 25% study civil government or civics. Of the one in 40 that enter college, probably less than one-fourth take up political subjects.

Should we be astonished at incompetency and corruption, at bossism and machine politics, in American local government? The general spirit that pervades our common schools, their social atmosphere and discipline, are decidedly democratic. But should there not be, through the upper grammar and through all the high school grades, in appropriate and impressive form, systematic indoctrination in the essential principles of democracy? Can there be adequate preparation for democracy without knowledge of democratic government; of the conditions and laws of its life and health, and of its decay and death?

The four courses of study (Classical, Latin Scientific, Modern Language, and English) which, according to the U. S. Commissioner of Education, serve as models for high schools and academies throughout the country, and which were recommended to the National Educational Association in 1893 by the "Committee of Ten" on Secondary School Studies,—these courses are filled with studies of ancient languages, modern foreign languages, and English; mathematics, natural and physical sciences; with a little history sparingly thrown in. American history is not mentioned; neither is political, social, or moral science. Greek, Latin, French, Botany, and even Meteorology, however, are considered as quite essential to the education of an American citizen. If this is the best the National Educational Association can do for American education,—let us call in a committee of business men selected at random from almost any city in the United States, and request them to draft new courses of study for our high schools and academies.

### **Should Children of the Poor be Allowed to Work**

It may be said that to make the compulsory school period eleven years (7 to 18) and strictly enforce the law, would be impracticable if not undesirable; that many parents are unable to dispense with the labor or wages of their children; that children are often thrown upon their own resources for support; that it is better to let them aid themselves or their parents than to call upon public or private charity for help.

Who gains most from democratic government? Who most insistently demands it? The poor. They will have nothing less. Why should any of them ask, then, to rear their children in ignorance? Besides, children have certain, at least, moral rights—food, clothing, shelter, and, in this country, a public school education. If these cannot be provided, parents have no moral right to the possession or control of children. At least, healthy, able-bodied parents who, through their own

fault, fail to supply this minimum, have no such right, and they should be sternly dealt with by the law. Such unnatural parents are found in almost every large community. Modern legislation is full of expedients for the defense of helpless children whose lives are coined by lazy, able-bodied parents. In any case, the State cannot afford to allow children to grow up without schooling. Ignorance is far more expensive to the community than education. Indigent parents, incapacitated for work, or unable to get work, should receive public aid, or be provided with public employment.

### **Education and Self-Support.**

To what extent is our educational system qualifying the young for the economic duties of citizenship?

In 1904-5, out of 1214 city and village school systems of the United States, 420 were teaching some sort of manual training, "in some of the grades." These were mostly in cities of 8,000 population or over. In the same year there were 209 manual and industrial schools, with 29,596 elementary, and 44,346 second grade pupils. There were, also, 62 agricultural and mechanical colleges, in which, in addition to liberal courses, courses in agriculture, horticulture and dairying, and in the mechanic arts, were given. In these colleges were 54,947 students. A few States in the West and South have recently begun to establish agricultural and mechanical high schools, and to introduce into the regular high schools, studies in agriculture. In the same States there is a movement for the introduction into the common schools of rural communities of nature studies and elementary agriculture. The commercial or business course is becoming more and more prominent in the curriculum of the average high school and academy. Industrial and technical high schools are being established in several cities. There is also a widespread feeling among educators, among business men, and among labor leaders that educational policy must be changed if we are to meet the pressing needs of the mass of the people.

This is something of a showing for industrial education; but it is only a beginning. In order to make any substantial impression on the country, the movement must be widely and speedily extended. The "manual training" given in "some of the grades," in one-third of the village and city school systems, is not *industrial* training, but, at best, only a part of the rudiments of it. In the year 1905 there were 12,000,000 persons between the ages of 12 and 18 years. During that year there were enrolled in Manual and Industrial Schools, 73,942 pupils; in Normal Schools, taking professional course,

93,640; in agricultural and mechanical colleges, pursuing courses in agriculture and mechanics, 30,000; in professional schools and colleges, 61,372; in schools of technology, 16,000; in business schools, 146,086; in general schools and colleges, taking business or commercial studies, 116,712; in schools for nurses, 19,824; in reform schools, receiving some industrial training, 30,378; in schools for defectives, receiving industrial training, 32,000;— a total of 619,954 persons receiving more or less special or vocational training. That is,—with a vocational school population, between the ages of 12 and 18 years, of 12,000,000, there were 619,954 or about one in twenty in training. But of this number, probably one-half were above the age of 18. If we extend the vocational school age to 22, the total vocational school population would be 18,000,000, and the proportion of those in training,—about one in thirty. How many of the 619,954 fully completed their courses of training? Probably not to exceed one-half. It is therefore quite probable that in 1905, not more than one in sixty between the ages of 12 and 22 years, were receiving in schools thorough instruction or training for their life work. If this is an age of industry and specialization, our schools show little indication of it.

### **The Duty to Labor, and the Importance of Wealth.**

Every living person is a consumer. Within reasonable bounds of age, health and strength, he should also be a producer. If he does not produce at least the equivalent of what he consumes, he must take from the share of others. The working-age, under present economic conditions, should probably be from the twentieth to the sixtieth year. During that period, all persons of both sexes, while not incapacitated, or in the higher schools, should be doing useful work. Are they doing it? According to the census of 1900, there were, at that time, 2,500,000 youth between the ages of 10 and 20 years not attending school, and not employed in any gainful occupation. There were also 1,000,000 men between the ages of 21 and 60, idle. There were 14,000,000 women between 21 and 60 years of age, unemployed in gainful occupation, 1,000,000 of whom could probably be classed as idle. It is expected that the young and the old, the incapacitated and those attending school, will be provided for without work on their part. But here is an unjust and an unnecessary burden of from five to eight hundred millions of dollars for the annual support, mainly of the idle.

Lack of employment will not account for this heavy burden; the census year was an unusually prosperous one. It can

nearly all be accounted for by the lack of industrial education.

Eighty-five percent of the present working population (those who work for pay) are engaged in producing wealth, i. e. material utilities; about five percent are engaged in professional service; the other ten percent are in various forms of personal service. Every institution, agency, or activity among men, depends, for daily existence, upon the steady production and supply of material wealth. The advance of civilization, the amelioration of human conditions, the realization of social and ethical ideals,—all depend upon the progressive production and accumulation of wealth, especially in its capital form. The life and health, and to a large extent the discipline and character, of 85% of the working population, must be derived directly from their employment in the industrial or commercial field. No command of the Decalogue is more explicit than the command *to labor* six days of the week. That there could be any physical, mental, or moral health or growth without systematic labor, was contrary to the eternal laws of God and of Nature. Stop the wealth producing agencies of the world for one year, and nine-tenths of the human race would disappear from the face of the earth. Could the world accumulate wealth enough to supply all its needs for a generation, and then live in idleness,—the remnant of virtue inherited by the following generation would be too small to save it from extinction.

### **The Useful before the Ornamental.**

When it is known that 18 out of every 20 of the adult population must work for an honest living; that 17 of the 18 must work at some trade, or some industrial or commercial pursuit; that no part of our social system can function without a continuous production and supply of wealth; that human capacity and character, apart from labor, speedily decay;—when these things are known, is it not astonishing that our public school system should so long have disregarded the practical and fundamental needs of popular education? “First—what is necessary; next—what is useful; then—what is ornamental”; that, and not the reverse, should be the order and emphasis of our common public education. Load our youth down with “accomplishments” as we will; gild them with “culture”; adorn them with “classic learning”; give them wit, fluent speech, and polished manner,—all of them,—and yet leave out the practical skill of hand and brain, the power to create useful things, the ability to perform necessary service, readiness to supply the common wants and to do the common work of life,—leave out these, and we should not only deprive



them of superior educational training, but should implant within them false and pernicious ideas of life, and rob them of the very thing upon which their existence depends, and which, in one decade, does more for the human race than all the refined learning of a thousand years.

The sad and disastrous mistake of an unpractical education, is well illustrated by results obtained by the Salvation Army's Anti-suicide Bureau during its first year in London, 1907. Of 1,125 hopeless and despairing men and women of the middle class who applied to the Bureau for consolation and advice, "most of them", we are informed, "had had a superior education which rather unfitted than qualified them for work within their reach."

### **The System We Should Have.**

There should be a public system of industrial education,—universal and compulsory. It should begin in the primary, and extend through the grammar and high school grades, and should run parallel with the general courses. In the elementary grades, the rudiments of trades and industry should be acquired by the boys, and the elements of domestic economy by the girls. In the high school, trades and domestic economy should be completed. In rural communities, instruction in the elements of general agriculture should be given in the grammar grades, and every county should have its agricultural high school. Every city of considerable size should have its commercial or business high school, or business courses in the regular high school. Professional, engineering, and the advanced technical, art, and agricultural courses, would be offered in the public and private universities. Thus we should have a complete system of industrial education. Every boy at the age of 18 or 20, would, in addition to his general intellectual training, be fitted and ready either for scientific farming, skillful craftsmanship, or industrial pursuit, or efficient business according to his particular high school training; while the way to higher technical or professional education would be open to those whose inclination and capacity should lead them in that direction. Every girl, in addition also to her general education, would know the various arts of practical house-keeping; if she were inclined to enter business, or some trade, as in most cases she would, or the higher education, the needful training would be open to her.

### **Practical Results of Such a System.**

What would be the effect of such a system of education? Social conditions, in the space of a generation, would be

revolutionized. The non-producing adult population would be reduced to a minimum, and a heavy burden lifted from the community; the criminal class, which costs the state millions of dollars every year, would vastly lessen; not only would the working population be considerably increased, but their average producing power would be doubled, the standard of living correspondingly raised, and wealth available for every beneficent social purpose increased in like ratio; childhood, early youth and old age would be exempt from toil; contempt for manual labor,—a not unnatural result of a system of education that points particularly to the college and the “honorable” professions,—contempt for labor, the worst curse that can befall a people, would be eradicated, giving place to a respect for labor, honest pride and satisfaction in its achievements, and an increasing preference for the industrial arts; crowding of the so-called “respectable” callings to the point of poverty, would cease; the professions would not be glutted, nor the ranks of unskilled labor; artisanship would receive the brains and character to make it what it should be; all occupations would be far better adjusted, distributed and remunerated; while the growing demand for social reconstruction, not altogether unprovoked, would lose much of its force. These are tremendous results, but they are not greater than their antecedent cause.

### **Misapplied Education—Not Over-Education.**

Leading men of Germany are reported to be crying out against what they term “over-education”. The output of the higher institutions of learning is said to be so great that a professional man can scarcely command a decent living. For example, the average salary of a university-bred engineer is stated to be \$515 a year.

Germany is not suffering from over-education, nor is any other nation. The evil, wherever it may exist, is *misdirected*,—*misapplied*,—education. Popular or social education should be such as to give, as nearly as may be, a rational balance or equilibrium to social labor forces; just as individual education should give a symmetrical, well-proportioned development to individual powers. Education, like any other output, may glut the market with its particular product. Over-production, however, is vastly more wasteful and harmful in education, than in the commercial world. Material commodity is insentient, and can wait for a purchaser. Fixed capital may often be converted. But human labor cannot wait for a purchaser, nor convert its skill into other forces. Popular education should be so distributed, adapted, and proportioned as to comprehend

the various degrees and kinds of human capacity and aptitude, and to lead each to its proper sphere of usefulness. Maximum efficiency of all the people, in all their respective and appropriate fields of activity,—that should be the aim of public education.

### **Expense of Industrial Education System.**

But, what of the expense of universal industrial education? Additional buildings, equipment, and teaching force. Would it not be greater than the public would bear, or than present economic conditions would warrant?

The total value of the public school plant of the United States in 1904-5, was \$733,446,805. The total expenditure of that year for maintenance and extensions was \$291,616,660., i. e. 16.8 cents per day or \$25.40 per year for each pupil in daily attendance; and \$3.53 per capita of the total population. Assuming that the cost of an industrial education plant and expense of maintenance and extensions would be fully as great,—the people would have to double their annual expenditures for public education. Could they do it? Would it pay in dollars and cents?

Whether or not they could do it, is a question of net income. The average annual net addition to the wealth of the country is about \$30 per capita. One eighth of this annual net accumulation would operate and maintain the system. Ten dollars a year per capita from those employed in gainful occupations would pay the bill. One sixth of the amount annually spent for the luxuries of drink and tobacco would pay it. An increase by 16 2-3% in the revenues derived from taxation, would pay it. Buildings and equipment could be paid for out of long term, low interest state bonds. Interest, sinking fund, and depreciation charges would not add more than one seventh to the above estimated annual expenditure. The complete installation of plant would probably require a period of ten or fifteen years. This would distribute the burden. The increase in that time, in national wealth and in revenues from taxation, would offset the above one-seventh.

### **Would the Investment Pay?**

Would it pay in dollars and cents? The state and locality would derive revenue from industrial education, indirectly, through the increased producing power of the population and the consequent increased amount of wealth available for taxation. A universal income tax, in this case justifiable—for it would rest upon a universal producing power created by the

state,—would yield larger revenues than a property tax. The state and locality would also save large sums now spent for charity, and occasioned by crime. We have stated the opinion that industrial education would, in the course of a generation, increase the amount of national income by 100% over and above what it would otherwise be. If that be true, then public revenues could probably be increased 100% without raising the rate of taxation.

Mr. James M. Dodge, in an address in 1903, to the American Society of Engineers of which he was president, made the following calculations: At the age of 22 years, the producing or earning power of unskilled labor, is \$10.00 per week; of labor trained in the technical school, \$13.00 per week; of shop-trained labor, \$13.50; of labor trained in the industrial or trade school, \$17.00. Ten years later, at the age of 32 years, the producing power of these same men would be:—

Unskilled labor, \$10.20 per week, an increase of 20 cents.

Shop-trained labor, \$15.80 per week, an increase of \$2.30

Industrial school labor, \$25.00 per week, an increase of \$8.00

Technical school labor, \$43.00 per week, an increase of \$30.00

If we estimate that labor trained in the industrial school will produce, during the working period of life,—say 40 years from 19 to 59, an average of \$10 per week more than unskilled and shop-trained labor,—what would that be worth to the country? Taking the population of 1900 and assuming that it remains stationary, in the space of 40 years, thirty million men would have been put through the industrial schools; of these, twenty million would constitute the working force. At the end of the period, 500,000 men would have worked 40 years; 500,000 men 39 years; and so on down to 500,000, one year. Now, charging against the system the original investment—\$733,446,805; also the accumulating annual expenditures for operation and maintenance; and add to these annual fixed charges for interest, depreciation and sinking-fund; and assume that the system must run five years before returns begin;—could there be any financial profit from such an outlay? The profit accruing would be as follows:—the first working year, i. e. the sixth year of the system, would show a yield in increased product of 10.4% on the total investment; the fifth year, a yield of 82.2%; the tenth year, 214.8%; the twentieth year, 504.8%; the fortieth year, 1114%. In the fortieth year, the sinking fund would have liquidated the bonded debt or original cost of the plant.

In the above calculation we have assumed the increase in producing power to be 16.66% less than that given by Mr. Dodge; the working year is estimated at only forty weeks; no increase in the working population is allowed; the vast gain in

the productivity of the labor of women, in the trades, in business, and especially in domestic arts, is entirely eliminated. And yet, with such enormous discounts, forty years of industrial education will yield an increased labor product of one hundred sixty-four billion dollars, upon a total outlay of less than fourteen and three-quarter billions! i. e. a profit of 1114%. Such is the gain in the product of *labor*; what would be the gain in the product of *capital* due to the co-operation of more efficient labor? If the increased product of capital were but 2%, that, even with conditions of 1900 stationary, would amount to at least 16.40 billions of dollars in the forty year period, or more than enough to wipe out the whole cost of industrial education.

Would industrial education pay? Indeed, is there any other form of public investment that will pay anything like such profit? New York state is putting one hundred one millions, and no one knows how much more, in a *barge canal*. What net profit will that show after forty years of use? The national government, we are now told, should spend five hundred million dollars for the improvement of the Mississippi river and its tributaries. Money well spent, perhaps. But which do we need most, just now, lower freight rates or working efficiency among our people? Which would yield the larger dividends? Accumulate capital, multiply captains of industry, build lines of transit, and add to other commercial facilities as we will,—if the mass of labor is untrained and inefficient, our economic progress will not only be relatively slow, but its path will be beset with the menace of social discontent and political turbulence. Two or three hundred dollars put into the industrial training of a boy, who subsequently works during the full period (from his 20th to his 60th year), will yield sixteen thousand dollars. We are called a *practical* people. And yet, while we wax eloquent over trade schools for indians, negroes, lunatics, and criminals, we pass over the mass of our white population as though they were to be fed from the skies, or were especially exempt from labor by Divine Providence. If industrial education is good for any race or condition of men, it is good for all men.

### **Trade Follows the Trade School.**

We should take counsel of the German people, whose scientific spirit has placed them in the lead of the educational world, and has made Germany, everywhere, the synonym for educational thoroughness and progress. Germany has established her industrial schools by the hundreds. Why? Because she knows that her growth and prosperity depend, largely, upon the ability of her people to produce efficiently,

and that depends upon their industrial training. Germany is conquering markets in every quarter of the globe,—not by her “flag”, but by her industrial and technical schools.

The United States has entered upon the stupendous task of opening and keeping open the commercial door of Asia, the future economic battle ground of nations. What benefit are we to derive from it? A giant navy with the Phillipine base will maintain our undisputed entrance to the field; but economical production and transportation can alone match the resources of our competitors. The “open door” will mean to us only a heavy burden of expense, unless we are to pass through it with marketable products. “Trade follows the Flag”—expresses a truth of a past age, when commercial policy meant national monopoly of colonies or exclusive “spheres of influence”. Over the entrance to the market of the future is the legend—Trade follows the Trade School.

### Crime and Industrial Ignorance

Under the heading — “Idleness The Gateway To Prison”,—Mr. Speed Mosby, Pardon Clerk for the state of Missouri, states the following in a recent magazine article: — “Two-thirds of the convicts in the Missouri penitentiary are men without trade or profession. One-third of the convicts there confined — are young men, ranging in years from eighteen to twenty-five. *Nearly all of these came to prison absolutely without the knowledge of any useful and gainful occupation.* Considerably more than half of those convicted of crime are ignorant of any kind of trade. Comparatively few of the younger are illiterate. In my own experience, I have never met one who could not read or write, and very many (by far the greater number, I should say) are possessed of no small degree of intelligence. But, however stupid or however precocious they are found to be, almost without exception they are young men *who have not applied themselves to useful, honest work.* This is true of both the poor and the well-to-do. There is no warrant for saying that the tendency toward criminality is naturally greater among the idle poor than among the idle rich. One frequently meets, behind the prison walls, young men of good parentage; young men, too, who could not plead poverty as an excuse for crime. Idleness brings them there.”

That conditions in Missouri are not peculiar to that state, is made evident from an examination of other state prison reports and federal reports. The New York report for 1906 shows that of those confined in the three state prisons on that date, 60% were without knowledge of skilled trade or profess-

ion, when committed. But of the 40% who possessed such knowledge, many, no doubt, had obtained it in penal and reformatory institutions; for 56% of all the prison inmates had been in penal institutions before. Of the 25,057 male major offenders committed to state prisons in all the states, in 1904, 66% were without trades or professions, when *last committed*; while of the 90,930 male minor offenders committed in that year, 76% were without trades or professions when last committed. Of the female major offenders, 94% had no trades.

### **Incentive and Preparation.**

In the same magazine is an article by Lord Balfour of England, on "The danger of Socialism", in which the writer maintains that the only way to prevent socialism from under-mining and overthrowing English civilization, is to make the incentive to individual efficiency the strongest possible, by securely preserving to the individual the net earnings of his labor.

But of what avail, as an incentive, is law that protects private property and prevents plunder,—if the individual is not first qualified, fitted, to earn or acquire property? If socialism is making headway in England, it is due, in no small measure, to the antiquated, unpractical, one-sided system of education prevailing in that country. Socialism will advance in every modern state so long as similar conditions obtain.

### **Education and Social Efficiency—Morals and Health.**

Now, as to the manner in which our educational system prepares our youth for the general social duties of citizenship. This is a question, largely, of moral character and of physical health and vigor. Whatever instruction in ethics is given in the common schools, seems to be indirect, incidental or immediately connected with school discipline. That subject, as a rule, forms no part of the curricula. Moral Science, as we have before stated, is not even mentioned in the "Model High School Courses" that so generally serve as standards throughout the country.

In divorcing church from state, morals were left to religion. If that was not so at first, it has become so, at least in this country. The church preaches morals; the school trains the mind. Yet we all know that no social system can endure, that does not rest upon sound practical morals. The masses may or may not be in the churches. At present they are not there; at least not the Protestant masses. But they are, will be or may be, in the schools. The school is the only sure opportunity to

give ethical instruction. Our youth are there,—receptive, plastic, impressionable. Never again does the opportunity return. We cannot depend alone upon family or church for adequate moral instruction; for will not these, in the long run, drop to the level of the school? Not that the power of religion is derived from secular education; but this,—a people who will not effectively apply, in their public education, the most vital part of their religion,—practical morals,—are quite likely soon to lose that religion, though they may retain its external forms and symbols. We cannot depend upon the Press; for the Press is little more than a reflector. Pulpit, Press, and Platform may thunder against wickedness as they will; even though they were independent and original forces, their words will beat upon deaf ears, if God and morals be banished from the public schools. The laws of right and wrong conduct; the simple virtues that make for the weal of individual, family, and state; and the sins, vices and follies that enfeeble, corrupt, and destroy them,—these vital truths should be impressively taught throughout every grade and section of the public schools. Why not graduated studies and lessons in Moral Science for all the grades, just as we have graduated studies in Language and Mathematics? Are not right conduct, sanity, and purity, quite as important to this nation as reading and ciphering? Let us implant in the minds of our youth, the sense of right and duty; for without this, all other knowledge is vain.

Physical health and vigor, while largely influenced by economic conditions and home training, may yet, in the long run, be determined by the school; for, as we have indicated, the home as well as economic conditions are most sensitive and responsive to the school. School buildings are constructed with larger reference to the health and comfort of pupils; physical exercise and medical inspection are more and more insisted upon. But, making the school building right and requiring physical exercise in school hours, is not enough. *The pupil should know the specific conditions and laws of good health.* Diet, clothing, cleanliness, relative nutritive values of foods, symptoms of common physical disorders and simple remedies, etc. One may be taught the structure and function of every part of the human body, and the evils of tobacco and drink, and still be ignorant of the art of physical wellbeing. Moreover, for the boys, during that most critical period, adolescence, beginning with the seventh grade of the elementary and continuing on through the high school, there should be plain, full, and appropriate instruction by competent physicians. It seems, to say the least, most unfortunate, that matters of vast consequence to the individual and family, and



to the wellbeing of society, should be tabooed because of a false sense of delicacy or propriety, or because of pure neglect.

Unfortunately, a public educational system, like most other public institutions, moving sluggishly in the wake of human events, is quite likely to be the result of the thought of yesterday; the thought of yesterday, the result of the facts of the day before. How to keep education abreast of the age, squared with the conditions of the time,—is a problem well worth the attention of our ablest scholars and statesmen.

### **Summary of Conclusions.**

1. Education is preparation for the duties of life.
2. Whatever the age, country, or condition, education should prepare the people to meet the primary demands imposed by the existing form of social organization.
3. Democracy can exist only in an atmosphere of high average intelligence and character. Its primary demands or duties of life, are political, industrial and social efficiency. Failure to qualify the people for any one of these must seriously weaken the social structure; continued neglect of all three is sure to lead to wide spread ruin.
4. Education in the United States to-day is neither universal nor compulsory, except in name. But one-half the school population is regularly in school, while the majority of these receive less than a full elementary training.
5. Instruction in political knowledge—specific preparation for self-government,—is almost entirely lacking.
6. While eighty-five in every hundred of the working population must engage in some branch of industry or commerce for a living, less than three of the eighty-five receive any practical training in our schools for their life work. But one in sixty of the total population of vocational school age is fully trained for his special vocation.
7. Religious instruction is generally excluded from public education; anything like direct, systematic or comprehensive teaching of morals is unknown.
8. There is no adequate instruction as to the laws and conditions of physical health, while facts as to both health and morals, that fundamentally concern the wellbeing of individual, family, and state are utterly unmentioned.
9. Every consideration of sound public policy and of correct educational thinking, compels us, with all reasonable speed, to eliminate from our public common school education what is antiquated or useless, and what is for mere ornamentation

or display; to frame a course so rationally balanced in its instructional, disciplinary and cultural studies, and in its physical and vocational training, that it will meet the vital needs and conditions of our common life; to enroll the entire school population and keep them in regular attendance for the full educational period.—This is a remedy for social deformities and ills, that will cure. Most other reforms are but palliatives. For education is the only power that can consciously mould the unit of social life; consequently, the only power that can determine, with purpose and design, the type of civilization and the speed of human progress.

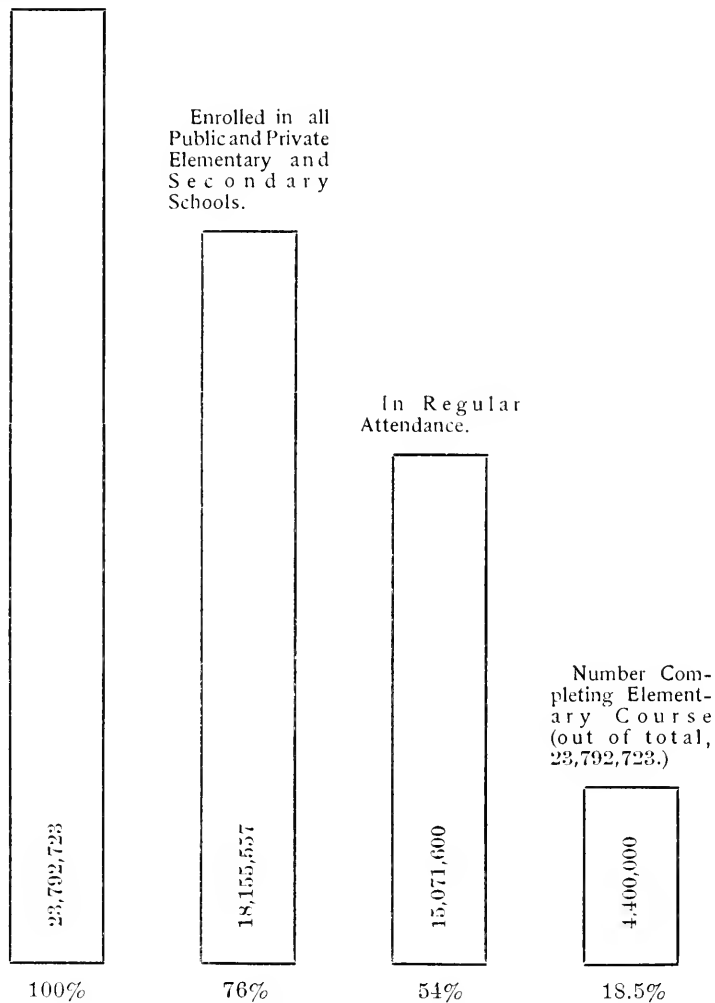
## Graphic Representations

of Prominent Features of American Education are shown on pages immediately following.

## General School Education.

Representing Elementary, High School and College Education Received by our Population of School Age.

Total Population of Elementary, and Secondary or High School, Age (5-18 yrs.) 1906.



Number Enter-  
ing High Schools  
and Academies  
(out of total.)

3,001,616

12.6%

Number Com-  
pleting High  
School Courses  
(out of total.)

819,696

3.4%

Number Subse-  
quently Entering  
Colleges and  
Universities (out  
of total.)

438,080

1.84%

Number Com-  
pleting College  
Course (out of  
total.)

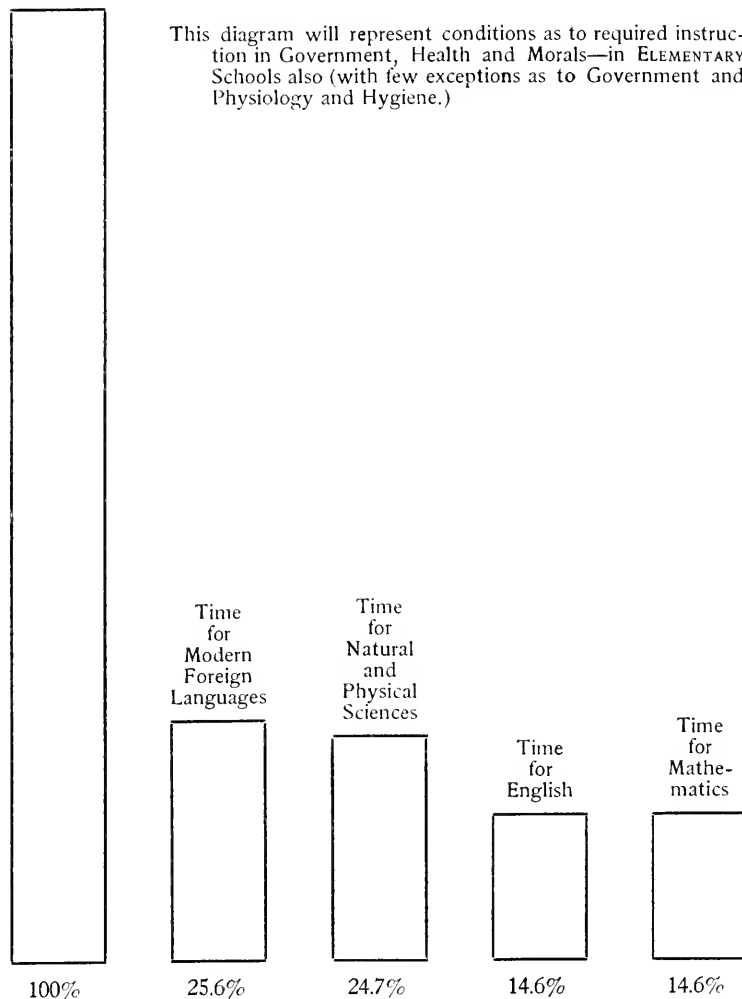
160,000

.67%

## Required Instruction in Government, Health and Morals— in High Schools.

REPRESENTING THE DISTRIBUTION OF STUDIES in Courses of Instruction Recommended to the National Educational Association in 1893, and since then, with some exceptions as to instruction in Government, and with the exception of such incidental and meagre instruction in Health as is given in Courses in Physiology and Hygiene, Generally Followed in both PUBLIC AND PRIVATE HIGH SCHOOLS AND ACADEMIES. ALSO Showing the RELATIVE EMPHASIS PLACED UPON GOVERNMENT, HEALTH AND MORALS.

Total  
Time of  
Instruction



This diagram will represent conditions as to required instruction in Government, Health and Morals—in ELEMENTARY Schools also (with few exceptions as to Government and Physiology and Hygiene.)

Time  
for  
Ancient  
Languages



12.8%

Time  
for  
History  
(other  
than  
U. S.)



7.3%

Time for  
Required  
Instruction in  
Government



0%

Time for  
Required  
Instruction  
in Health



0%

Time for  
Required  
Instruction  
in Morals



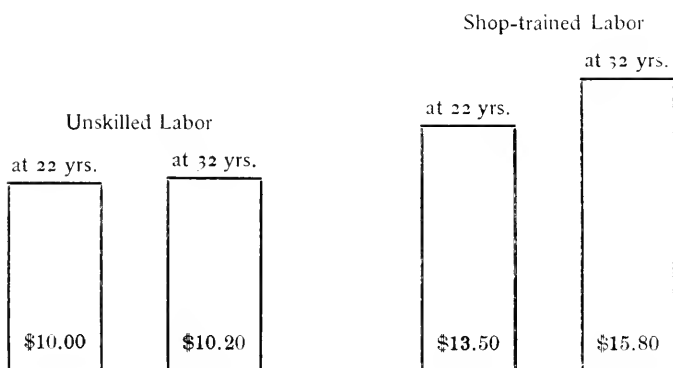
0%

## Value of Industrial Education.

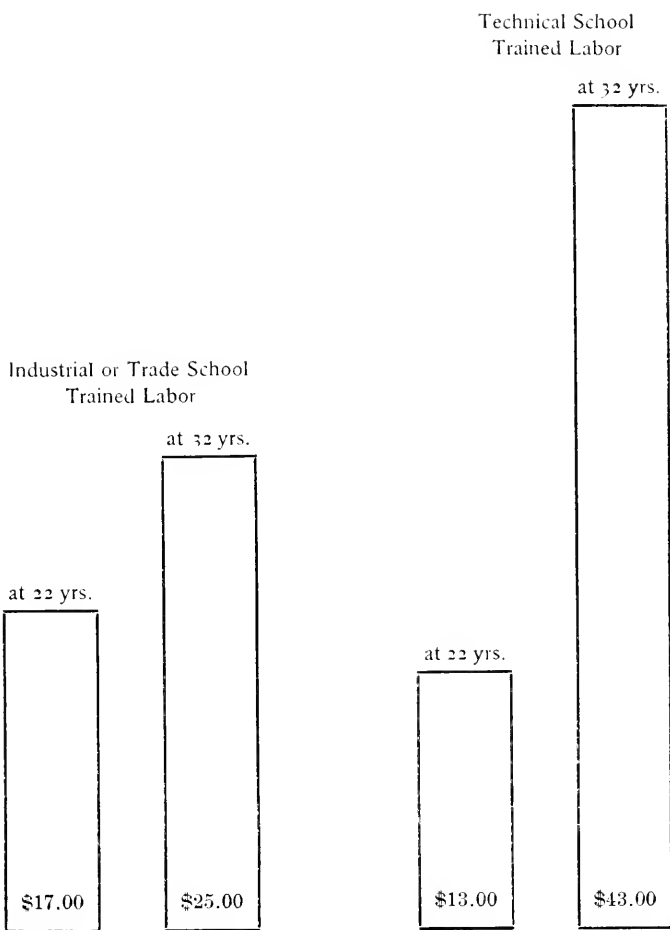
Based on estimates made by Mr. James M. Dodge.

### Producing Power of Labor at 22 and at 32 Years of Age.

(Measured in weekly wages.)







## Vocational School Education.

Representing the Extent to which Our Population is Specially Trained in the  
Schools for Life Work.

Total Number of  
Persons of Vocational  
School Age (12-22  
yrs.) 1906



100%

(If the vocational school age given in the first column be shortened by 2 years, e. g.,—placed from 12 to 20 years—the percentages in the second and third columns will be increased by approximately one-fifth, and would therefore be 4.69% and 1.98% respectively.)

In Vocational  
Schools, or Tak-  
ing Vocational  
Studies in Other  
Schools, (not in-  
cluding those in  
Reformatories or  
Institutions for  
Defectives.)

557,576

3.9%

Number Completing  
Courses.

278,788

1.59%

# Notes on Recent Educational Literature

By William Kent\*

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In recent years there has been an enormous production of all kinds of educational literature. No one can be expected to read any more than a small fraction of it. Much of it is only of local or temporary interest. There is evidence, however, of an important change in the character of educational literature of the higher class. The authors of it are not content as in the past merely to voice their sentiments of praise or blame for existing systems, but are pointing out definitely the direction in which progress should be made and details of the methods by which reforms may be accomplished. The belief has long been common that our whole educational system needs a careful review and reform, but these beliefs appear now to be crystalizing into plans, and the results are apparent in the organization of societies for promoting educational reforms and in the acts of various state legislatures looking to educational progress. The trend of modern thought concerning educational reforms will appear in the following notes taken from various recent publications:

## The U. S. Bureau of Education.

Vol. 1 of the Report of the U. S. Commissioner of Education for the year ending June 30, 1905, contains many valuable papers. Among them are Abstracts of the Report of the Moseley Educational Commission, pages 1 to 39; The teaching of Agriculture in the Schools of France and Belgium, pages 87 to 96; Higher Education for Business Men in the United States and Germany, from the report of Dr. Jastrow of Berlin University, pages 97 to 110.

The American Method of getting a Business Education is explained by Dr. Jastrow in the following interesting paragraph:

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"When I asked how a young man who had just entered a business acquired the practical business knowledge requisite to a successful career, if there was no one whose duty it was to give him instruction, the stereotyped reply was: 'Oh, he must pick it up.' This 'picking it up' is, indeed, the great secret of American life, to unravel which a brief sojourn of only three months does not suffice. I can not, however, abstain from mentioning what a gentleman replied to me, who, though not a merchant himself, is in a position where he has many opportunities to acquire a knowledge of commercial life: 'You do not understand how young people learn the mercantile profession without special instruction? The case is very simple. They never do learn it. It is a pity to see how thousands enter this calling and go to the bottom and how it depends on mere accident whether or not a young man acquires, during the first few years, the knowledge necessary for success in his career.'"

Art Education an Important Factor in Industrial Development, by Halsey Cooley Ives, LL. D., Director of the St. Louis School and Museum of Arts and Director of the Departments of Arts at the Universal Exhibitions at Chicago, 1893, and St. Louis, 1904. Pages 155 to 183. Probably no more important paper on this subject has ever been published in this country. It is a severe criticism on the American educational system for the poverty of its training in art. The following is an extract:

"In the main, our schools have ignored or failed to bring within their sphere the broad and liberal application of art; and in this they have slighted the applied arts, looked down upon the craftsman, neglected design, made technique their god. They have trained a multitude of eager students to only paint pictures, that few men want and fewer buy, and have elaborately equipped the great majority of those who flock to them for instruction to lead lives of want and uselessness. It was not so in the days of the Renaissance. It is not so in countries where art is broadly and properly taught, and it ought not to be so here. With the crying need for reform the present conditions cannot last, and a remedy will be applied.

What is needed is not so much more art schools as more art in our common schools. One of the faults in our art educational work is in not beginning its influence early enough in the training of our people. We can have no real foundation for art appreciation until one generation of school children shall have had a course of art instruction, continued from the

day of beginning the work in a kindergarten until graduating from the grammar or high school."

Instruction in Forestry, pages 237 to 244. Five State universities are now offering four-year courses in forestry, viz: Iowa, Maine, Minnesota, Nebraska, Ohio; and Michigan Agricultural college, Yale University, and the University of Michigan have graduate courses.

The American System of Agricultural and Research, by A. C. True, Director, Office of Experiment Stations, U. S. Department of Agriculture, pages 244 to 255. This article is chiefly historical and descriptive. It is interesting to note that some progress has been made in agricultural instruction in secondary and primary schools, some of which are supported by state or local funds. Alabama has nine such schools, one in each Congressional district. In Connecticut there is a school of Horticulture, just outside of the City of Hartford. In Massachusetts, an agricultural course has been established in the Mt. Hermon School, near Northfield. At Groton there is a school of horticulture and landscape gardening for women. Simmons college, Boston, provides a course of theoretical and practical horticulture for women. Wellesley college also announces a course in elementary horticulture and landscape gardening. In Missouri the three state normal schools give instruction in agriculture for the purpose of preparing teachers to introduce this subject in the public schools of the State. Several other agricultural schools of secondary grades are mentioned. The State Legislatures of Alabama, Georgia, Illinois, Louisiana, Maryland, Michigan, Missouri, North Carolina and Wisconsin have recently passed laws whereby the public schools are permitted or encouraged to provide instruction in agriculture.

Progress of Education and Reform in China, pages 256 to 265, by E. T. Williams, Chinese Secretary of the American Legation at Peking. China is undergoing an educational revolution. A large number of students are sent abroad for education, most of them to Japan, though several hundreds have been sent to Europe and America.

The American School System in Porto Rico, pages 293 to 344. Satisfactory progress is being made in the introduction of American methods, but the work is suffering for the lack of funds.

Education in the Philippines, pages 345 to 364. The schools have long passed the experimental stage. "It is certain now that they must continue to increase in efficiency and numbers until they are performing their whole duty toward the uplifting of the Filipino people."

## New York State Bureau of Education.

The report of the New York State Bureau of Education for the year 1907 contains some interesting matter. The compulsory education law is being enforced more effectually than formerly. The result is shown in the fact that the percentage of daily attendance to enrollment has increased from 65 per cent. in 1896 to 76.3 in 1906. The report says:

"During the year, the compulsory education law has been administered with firmness and uniform steadiness in every section of the State, and while it must be conceded that many children have not been in school at all, and many others very irregularly, yet substantial gains have been made in attendance at the schools over previous years.

In the enforcement of these laws, the problem of child labor blocks the way beyond all others. On the one side, the manufacturer, the merchant, the farmer, seem, as never before in our history, bent on employing cheap labor, or that which seems cheap. \* \* \* \*

On the other hand is the parent, who apparently places the dollar above the child. \* \* \* \*

Authorities charged with the enforcement of these laws, including the courts, too often lose sight of the rights of the child by showing unwarranted consideration for the parent, whereas the law was enacted by the Legislature to promote the permanent well being of the child rather than the temporary interests of the parent. \* \* \* \*"

The work of the elementary department is not entirely satisfactory.

"\* \* \* \* while gratifying progress is indicated in some departments of the elementary field, there does not seem to be as marked improvement in other directions as there ought to be or as we should have reason to expect. Work in the fundamentals of education, especially in reading, writing and spelling, use of English, both oral and written, and oral work in arithmetic (mental arithmetic) in simple computations and analysis of problems is not as a rule satisfactory. This seems to be peculiarly the case in grades 4 to 7 inclusive. In explanation it may be said that in these grades the teachers are more frequently weak, inexperienced or inefficient than elsewhere. \* \* \* \*"

The report does not explain why these teachers are inefficient or whether any steps are to be taken by the Department to increase their efficiency. It is well, however, that the Department recognizes the facts; the remedies may come later.

The report shows some astonishing statistics of the public schools of the state:

Year...	1886	1896	1906
Cost of maintaining schools	\$13,284,986	23,173,830	52,271,800
Teachers' wages .....	\$ 9,102,268	13,618,227	28,761,745
Expended for school houses	\$ 2,276,454	5,827,336	15,420,868
No. of children of school age		1,651,858	1,822,414
Average daily attendance ..	625,813	772,054	1,018,352

While in 20 years the school attendance has increased about 60 per cent., the total wages paid to teachers have increased 300 per cent. and the total cost of maintaining schools 400 per cent. This does not mean that education is costing too much now but only that we were in the dark ages 20 years ago. The country is rich enough to educate its people as they should be educated and the people are more and more appreciating the necessity for higher education. The number of high schools in the State has increased from 421 in 1896 to 668 in 1906.

In regard to the condition of education in New York State, Dr. Andrew S. Draper, State Commissioner of Education, in an address before the New York State Federation of Women's Clubs, Oct. 30, 1907, says, "The percentage of illiteracy in the State of New York is many times greater than in Great Britain or France or the German Empire or Switzerland or Scandinavia or Japan. Anything that you will do to support or force school officers to exact a complete attendance of all children of school age will be a substantial public service. If they refuse after their attention is called to a specific case, you may be sure of help from the Attendance Division of the State Department."

From addresses by Commissioner Draper, published by the N. Y. State Education Department, 1906:

"There is a large demand for training in the chemistry which enters into agricultural and manufacturing activities, in all lines of engineering, in the economics of productivity and trade, and in the technic of all the businesses which follow after them." Page 97.

"It is developing a rather common belief in the crowd that young people must be trained for subordinate places in business and for manual skill in the trades as well as for the colleges and for positions claiming deep scientific knowledge; that the high schools have not yet accomplished all they ought in this direction; that there is something lacking in the way of training the masses of children in the elementary schools for efficiency and contentment in the situations in life which they are likely to occupy; that something in the way of public trade

schools must be established for the children of the masses at a rather early age, and that the universities and colleges are called upon to recognize that fact and help realize it. In a word, the very development of the higher learning is creating the common thought that more must be done for the elementary learning, that not so much is being done for those who do not go to college as for those who do, and that more must be done to adapt the training of the masses to probable environment and to the inevitable conditions of hand labor and other self-respecting and useful employments." Page 98.

Commissioner Draper has continued his study of the subject of industrial education and in a notable address entitled, "Our Children, Our Schools and Our Industries," delivered at the meeting of the Associated Principals of the State of New York, held at Syracuse, December 27th, 1907, he took advanced ground in favor of the addition of industrial or trade education to the public school system. His address has been published in pamphlet form by the Bureau of Education. The following are some extracts from it:

"It seems clear enough that we are about to have a new class of schools in our system of public education. Provision must be made for schools which teach trades and also for schools of a more general character for those who leave the elementary grades to work in the stores and offices and factories. The school age must be extended, and the schools must keep hold of children until they are fitted to begin some definite employment. The public school system must support the industrial as well as the professional activities of the country.

"Not more than one-third of the children who enter the elementary schools in the cities of this state remain to complete the course. Only about one-half of them remain till the end of the fifth grade. The greater number drop out in the middle of the course because parents are indifferent, because the schools do not fit the child for definite work, because of the public indifference to attendance laws, because the age at which the law lets them leave the school is reached before the simple work of the school is done, and because the work of the schools is not up to the ages of the pupils.

"There is very little in the school system which makes for ambition and skill in work with the hands. There is much in it which makes for inefficiency and for misfits between adaptation to work and opportunity in life. We are alarmingly profligate of boys and girls.

"In the last twenty-five years the German exports of manufactured goods have increased more rapidly than those of the United States, notwithstanding our marvellous growth in population and in territory occupied.



"The old system of apprenticeship has disappeared from this country. The corporation is too intent upon dividends to be bothered with boys who are not content to become a mere part of the machine, and the labor organization is apprehensive about the effect of more workmen upon the scale of wages. We have come to the point where it is manifest enough that if millions of American boys and girls are to have their fair chance we must establish new public policies to give it to them; if anything like a desirable number are to become good workmen, the schools must train them for it.

"My suggestions and my tentative plan may perhaps be stated as follows:

1. Insist upon more complete and always up-to-date vital statistics. Know of the existence of every child, and when he is of school age have him accounted for.

2. Require attendance at seven years of age, instead of eight, and let it continue, in elementary school or trade school, to seventeen, but excuse from attendance before eight, at the parents' request, on the ground of immaturity, and also excuse from attendance whenever the work in the elementary school and trade school is completed, or after fifteen if the child is regularly at work.

3. Establish schools for teaching trade vocations, the work to begin at the end of the elementary course, and continue for three years.

4. Let the trades schools be open both in the day time and evening.

5. Establish continuation schools, to be open mainly in the evenings, where the work shall be of a general character, suited to the needs of youth who are employed through the day and are not doing the work in the trades schools. In other words, make our evening schools more general and better. Let the work in the continuation schools go perhaps half way or more through the high school course, but with less formalism about it.

6. Shorten the time in the elementary schools to seven years. Take out what is not vital for a child to know in order to learn or to do things on his own account if he has the power. Strive to give him power, and expect that through it he will get knowledge. Stop reasoning that mere information will give him power. Stop the dress parade and pretence about teaching, which consume time unnecessarily. Push the child along and aim to have him finish the elementary school in his fourteenth year. When he is fifteen send him to the trades school whether he has finished the elementary school or not.

7 Assume that if the child does not go to the high school, his school work may end with his seventeenth year, and not in his fourteenth year.

8. Put into the elementary schools, from the very beginning, some phase of industrial work. Up to the last year or two let it be work that can be done in the schoolroom, at the desks, under the ordinary teachers, and will occupy two or three hours a week. This might proceed from folding paper, molding sand, modeling clay, outlining with a needle, to the simple knife work in wood, plain sewing, knitting, and the like. In the last year or two send the classes to central rooms specially prepared, perhaps to the trades schools, for more complex wood work, cooking, etc. Always emphasize the drawing.

9. As the child comes to the end of the elementary schools, expect him to elect whether he will go to the high school, to a trades school, or to work.

10 Wherever he goes, expect that the schools will keep track of him until he is at least seventeen. If he goes to the trades school, expect him to get into the possession of the fundamental knowledge and something of the skill of a trade by his seventeenth or eighteenth year. If he goes to work in a store or factory, expect him to come to the continuation school till his seventeenth year is completed. Have him and his parents understand that he is responsible to the schools until he is perhaps eighteen years old.

11. Set up trades schools in spacious, but not necessarily ornate, buildings. Start the particular kind of trades schools that the business of the town and the interests of the trades call for. Let it be understood that wherever there is a sufficient number of children to learn a particular trade, there will be a school to teach it to them. Let the trades school partake more of the character of the shop than of the school. Hold to books, somewhat, particularly books which the pupils will be glad to read by themselves, carry mathematics a little farther, lay emphasis upon work with a pencil; let the main part of the work be with the hands; and let the atmosphere of the place be free and comfortable, so that young people will like it. Let the teaching be done by real artisans, who are intellectually balanced and can teach, rather than by teachers who can use tools only indifferently. Above all, have teachers who are not afraid of youth, and so are not under the necessity of brow-beating and badgering them a great deal, but rather who command respect because of what they are, and can lead the way to the pleasure of really doing things.

12. Keep the trades schools open afternoons and evenings. Have their pupils attend from four to five hours to as many hours a week as the pupil can give. Let the training be individual and let the progress of the pupil depend upon himself and upon the time he can give; but allow him to engage in other work for pay if he must.

13. Modify the child labor laws so they will articulate with the plan, and enforce them. Require employers to regulate their affairs so that employees may attend continuation schools or a trades school at least four or five hours per week.

14. Let the trades schools be supported by the town, but give them sufficient state aid to encourage their organization and dispose them to conform to the needs of the situation.

15. Meet any demand on behalf of girls as well as on behalf of boys.

16. Make it quite possible for one in a trades school to go to a manual training high school, and vice versa, but be careful to avoid the inference that one is to prepare for another. Let it be understood that each stands upon its own footing and leads to very different ends.

"Of course all this is tentative. It is all to be thrashed out in discussion and worked out in experience. We are breaking out new thoroughfares. It must not be overlooked that we have exploited the fundamental principles of our democracy in our politics and in our religion much more completely than in our education or in our industries. The application of these principles to our training and our work is now to be pressed to conclusions. When we do that, and not before, we shall assure the free American chance to every one and we shall give a new interpretation and a new power to be essential factors of our common life."

### **The Massachusetts Commission of 1905.**

Probably the most important educational paper that has appeared in many years is the Report of the Massachusetts Commission of Industrial and Technical Education, April, 1906. It is reprinted by the Teachers' College, Columbia University, New York, in a pamphlet of 196 pages. It contains a report of the preliminary Commission, appointed in 1905, under instructions to investigate the needs for education in the different grades of skill and responsibility in the various industries of the commonwealth, to investigate how far the needs are met by existing conditions and to consider what new forms of educational effort may be advisable. Fifteen thousand dollars was appropriated for the work of the committee, twenty

public hearings were given in different cities, and the report is full of the results of these investigations.

Following are some extracts from this report:

The commission was made aware of the growing feeling of inadequacy of the existing public school system to meet fully the needs of modern industrial and social conditions. The opinion was expressed by many speakers that the schools are too exclusively literary in their spirit, scope and methods. (Page 5.)

For the great majority of children who leave school to enter employments at the age of 14 or 15, the first three or four years are practically waste years, so far as the actual productive value of the child is concerned, and so far as increasing his industrial or productive efficiency. The employments upon which they enter demand so little intelligence and so little manual skill that they are not educative in any sense. (Page 18.)

There seem to be two lines in which industrial education may be developed—through the existing public school system, and through independent industrial schools. In regard to the former, the commission recommends that cities and towns so modify the work in the elementary schools as to include for boys and girls instruction and practice in the elements of productive industry, including agriculture, and the mechanic and domestic arts, and that this instruction be of such a character as to secure from it the highest culture as well as the highest industrial value; and that the work in the high schools be modified so that the instruction in mathematics, the sciences and drawing shall show the application and use of these subjects in industrial life, with especial reference to local industries, so that the students may see that these subjects are not designed primarily and solely for academic purposes, but that they may be utilized for the purposes of practical life. That is algebra and geometry should be so taught in the public schools as to show their relations to construction; botany to horticulture and agriculture; chemistry to agriculture, manufactures and domestic sciences; and drawing to every form of industry. (Page 20.)

The Commission would also recommend that all towns and cities provides by new elective industrial courses in high schools instruction in the principles of agriculture and the domestic and mechanic arts; that in addition to day courses, cities and towns provide evening courses for persons already employed in trades; and that provision be made for the instruction in part-time day classes of children between the ages of 14 and 18 years who may be employed during the remainder

of the day, to the end that instruction in the principles and the practice in the arts may go on together. (Page 21.)

The Commission submits for the consideration of the Legislature a draft of a bill embodying its recommendations for the appointment of a Commission on Industrial Education consisting of five persons to serve for five years and specifying the duties of such a Commission. (Page 21.)

The Commission believes that the elements of industrial training, agriculture, domestic and mechanical sciences should be taught in the public school, and, as already stated, that there should be, in addition to this elementary teaching, distinctive industrial schools separated entirely from the public school system. (Page 23.)

It has been said that the years from 14 to 16 are the "wasted years" of the child's life. The application was made to the child who enters upon his industrial career at such an age, and when we find that 25,000 of the children of the State of Massachusetts are at work or idle at those ages, we are led to believe that **THIS IS THE MOST IMPORTANT QUESTION WHICH FACES THE EDUCATIONAL WORLD TODAY.**

The State releases the child from its educational authority at fourteen, and the child who is no longer interested in the inactive school life, or who feels the stress of necessity for self-support, is forced to search for an opportunity to fit himself for industrial responsibilities. What awaits him? No schools exist which offer practical training until he at least is sixteen or eighteen and even then they are few in number and usually at a great distance from the child's home. He must turn to the "practical school of life" and seek employment, only to find that the doors of those industries which would afford him an opportunity "to pick up a trade" are not open to him until he is sixteen, or usually eighteen years of age, while very few of the so-called apprenticeships receive him under eighteen. Even in the unskilled industries of the better class, proprietors are becoming more and more averse to the employment of the younger child. The result is that he drifts into an unskilled industry, or into one which is undesirable in character. (Page 25.)

This investigation has been conducted in 43 of the cities and towns of the State, in every section of the State, and has followed 5,459 children into 3,157 homes and into 354 establishments, representing 55 industries. (Page 26.)

Five-sixths of the children in the cotton mills have not graduated from the grammar schools, and a very large proportion have not completed the seventh grade, while practi-

cally none of the children have had high school training. All of these children are by no means from the poorest homes; in fact, there are twice as many in what we have classed as good-grade families as there are in the second grade. Neither is the appreciation of education of low grade. Forty per cent. of these families have shown a decided interest in a school which would give their children wage earning powers, and have declared they wanted their children to remain in school; and, what is more tragic, 66 per cent. of them could have kept them there. (Page 44.)

Neither power nor advantage is gained by entering the industry at an early age; the child who does enter closes behind him the door to progress to a fair living wage; that child associates himself with our most undesirable population; the work performed by children is passing gradually to poorer and poorer classes of foreigners. The State should not insist on keeping all of its children in ignorance to support industries in which industrial education is of little value. (Page 45.)

The pathetic moment is not when the child leaves school, but when, having been at work, he is thrown out by "slack times," or "quits work" because he does not like it. He will not return to school, and he cannot find a chance to learn a trade. There are plenty of opportunities for the older boy with education, but this one must drift yet a year or two, if not longer, or always, and be content with unskilled labor. Sixty-eight per cent. of those found at work under sixteen are in the unskilled industries and the textile mills, as opposed to 9 per cent. in the high-grade skilled industries, and 22 per cent. in the low-grade skilled industries, outside of the woolen mills. (Page 86.)

Out of 35 or 40 superintendents interviewed in all sections of the State, all except 3 are of the opinion that the great lack is in the system, which fails to offer the child of fourteen continued schooling of a practical character, introduced and maintained by a central authority, especially qualified to know what should be done and how to do it, as local powers could not. (Page 87.)

Department stores and errand positions do not afford a living wage, and offer no opportunity for advancement to one. They are distinctly bad in influence, since the younger employee is so shifting, resulting in instability of character. When the child has reached sixteen or seventeen, he or she must begin again at the bottom.

Sixty-eight per cent. of the children who commence work between fourteen and sixteen are subjected to the evil influences of these unskilled industries or are in mills. They

have wasted the years as far as industrial development is concerned, and in many cases they have forfeited the chance ever to secure it, because of lack of education. (Page 88.)

The tendency is to feel that the employment of children is a great disadvantage. The low-grade industries are taking children less and less; even the woolen mills are employing fewer children than heretofore. The result is that children are forced more and more into juvenile employments or the lower industries. Out of 272 employers who expressed an opinion, 193, or 70 per cent. declared it was no advantage to the industry to employ children under sixteen.

Another strong and growing tendency is to demand experienced help, and to refuse all apprentices and younger help. Eighty per cent. of employers declare they do not want children under sixteen, and 30 per cent. put the minimum age at eighteen.

It is certainly a problem as to where the next generation of skilled workers is to come from. Employer after employer refuses to teach, and union after union limits the number of apprentices. Both seem to say to the boy, "Not wanted here." (Page 89.)

The investigation work of Massachusetts has been done for the whole country. What is true in Massachusetts is undoubtedly true in other states. What is now need is not further investigation but legislative action.

### **The Massachusetts Commission of 1906.**

Report of the Massachusetts Commission of Industrial Education, March, 1907, Public Document, No. 76. The Commission appointed in 1905 recommended that a new Commission be appointed to establish schools in co-operation with the local authorities throughout the State. A bill for this purpose was passed in January, 1906, and the present pamphlet is the first report of the new Commission.

The act provides, among other things, that the Commission may initiate and superintend the establishment and maintenance of industrial schools for boys and girls in various centers of the commonwealth, with the co-operation and consent of the municipality involved, or the municipality constituent of any district to be formed by the union of towns and cities as hereinafter provided. The Commission shall have all necessary powers in the conduct and maintenance of industrial schools, and money appropriated by the State and municipality for their maintenance shall be expended under its direction.

Section 3. All cities and town may provide independent industrial schools for instruction in the principles of agriculture and the domestic and mechanic arts, but attendance upon such schools of children under fourteen years of age shall not take the place of attendance upon public schools as required by law. In addition to these industrial schools, cities and towns may provide for evening courses for persons already employed in trades, and they may also provide, in the industrial schools and the evening schools herein authorized, for the instruction of in part-time classes of children between the ages of fourteen and eighteen years who may be employed during the remainder of the day, to the end that instruction in the principles and the practice of the arts may go on together. (Page 8.)

Following are a few extracts from the report:

"In general, the conclusions reached by the preliminary commission, as a result of its various inquiries, including an important special investigation into the problem of what becomes of the mass of boys and girls during the three or four years after they leave the grammar school, may be said to mark an epoch in educational progress not only in Massachusetts but for the country as a whole." (Page 13.)

"Boys are not wanted in most of the skilled industries until they are sixteen years of age. The total result is a great number of boys and girls from fourteen to sixteen years of age, most of whom are at work in various kinds of juvenile occupation, in which they learn no trade, are subject to little if any beneficial general education, and often too much harmful education from shifting experience and environment. Large numbers of these children would be in school if the school promised preparation for some life pursuit. These years are of little economic value to such children, and there is little increase in the economic value of most of them as time goes on. Hence, these are at present wasted years—lost to the children because of the lack of economic growth, and to the industries because the children are not fitted to satisfy the demand for trained workers by the time they are old enough to be employed in the trades.

"These years and the subsequent years are, however, valuable for industrial education; but there is at present no agency whereby this education is provided, save here and there to a limited extent only, and then chiefly by philanthropy.

"Hence the need of industrial schools to supplement the existing school system, and to meet a new educational need which has developed with the evolution of our industries and commerce." (Page 16.)



"With a view to securing a full expression of the public mind with reference to the establishing of industrial schools in the commonwealth, the Commission has held public meetings and informal conferences in several of the principal cities and mill towns of the State, in which the plans and purposes of the proposed schools have been discussed by men representing all the various interest of the community."

"The result of these conferences and meetings confirms the Commission in the belief that the people of the State as a whole are ready to co-operate in substantial ways with the Legislature in the gradual experimental building up of a system of vocational training of the new generation which in a few years begin to make up the industrial force of the commonwealth." (Page 18.)

"The members of the Commission are unanimous in the belief that all that is vital and essential to a proper scheme of industrial education for Massachusetts can be and will be brought about not only without opposition on the part of organized labor, but in many cases with the active and interested co-operation of its representatives. (Page 19.)

"It is the belief of the Commission that agriculture must be developed in Massachusetts on a plan different from the one so successfully followed in our Western States. Here our farming must be intensive, instead of extensive, as in the West. It is hoped that a typical agricultural school may be established before the next annual report." (Page 20.)

Action in regard to industrial education has been taken in various cities and towns. (Page 23.)

"The Fitchburg Committee, composed of employers, employees, representatives of labor unions and business men, have requested an appropriation from the city government, with a view to establishing a day school for fifty boys and twenty-five girls."

"The Worcester Education Association has taken the lead, and the city government has been requested to appoint a committee to co-operate with this Commission in the establishment of a school."

"In Pittsfield two new school buildings are proposed, and it is likely one of them may be used as an industrial school. A committee has been appointed, which now has the question in hand, and favorable results are expected."

"In North Attleborough and Attleborough conference committees have been appointed, with a view to the establishment of a school of jewelry and silverware design."

"In Lawrence, the Central Labor Union and the Board of

Trade have appointed committees of conference, with the view to the establishment of a school at no distant date."

"The city government of Northampton has appointed a committee with power to represent the city in the establishment by this Commission of an agricultural school."

"The city government of North Adams has passed to its second reading an appropriation of \$7,500 for the establishment of an evening industrial school."

"The last Commission found that there are at least twenty-five thousand boys and girls in Massachusetts, between the age of fourteen and sixteen, who are now in various kinds of juvenile employments, or who are idle; and that these young people who enter the juvenile employments earn very little at the start, and increase their earning capacity but little as the years go on, so that by the time they are eighteen, or nineteen or twenty, they are able to earn little more than they had earned when they were much younger; and that at eighteen or nineteen a very large proportion of them have arrived at almost the maximum of their earning capacity. Now, the Commission, of course, desires to prevent this waste, and is especially desirous of securing for these young people a career in a trade which will insure them a steady job, and, if they are the right kind of workers, an increasing wage." (Page 29.)

"Since 1900 the city of Munich has gradually been transforming its 'continuation schools' for elementary school graduates (corresponding to our grammar school graduates) into elementary technical schools for apprentices in the trades and in business. The city now maintains forty different kinds of these schools. In 1900, were opened schools for butchers, bakers, shoemakers, chimney sweeps and barbers; in 1901, for wood turners, glaziers, gardeners, confectioners, wagon makers and blacksmiths, tailors, photographers, interior decorators, painters' materials; in 1902, for hotel and restaurant waiters, coachmen, painters, paper hangers, bookbinders, potters and stove setters, watchmakers, clockmakers, jewelers, goldsmiths and silversmiths; in 1903, for foundrymen, pewterers, copper-smiths, tinsmiths and plumbers, stucco workers and marble cutters, wood carvers, coopers, saddlers, and leather workers; and in 1905, for business apprentices, printers and type setters, lithographers and engravers, building iron and ornamental iron workers, machine makers, mechanics, cabinet makers, masons and stone cutters, carpenters." (Page 46.)

"Certain conclusions suggest themselves as a result of a study of these schools, namely:—

"1. They solve the problem of how to keep under appro-

priate educational influence during their period of adolescence that great body of youth who are obliged to leave school when only thirteen or fourteen years old.

"2. There is in them complete utilization of educational opportunity by the pupils. There is no economic or educational waste. Attendance being compulsory, punctuality and regularity of attendance are assured."

"7. The schools embody a well-defined policy that underlies all forms of activity in Germany; namely, that every efficient worker, whether in trade, business or profession, requires general education, and also technical preparation, for the particular work he is to do." (Page 51.)

### **Industrial Education in Different Cities.**

In the report of the Massachusetts Commission are given the names of many cities and towns in that State which are taking action in regard to establishing schools of trades. Professor Sweet's paper mentions several of the most important trade schools already established in different parts of the country. It is worthy of note that the Milwaukee School of Trades, which teaches pattern making, molding, core-making, and foundry practice; the machinist's trade, including tool-making; and plumbing and gas fitting; and which was founded and carried on as a private institution by public spirited citizens of Milwaukee, has recently, under provision of a law of the State, been added to the public school system of the city.

According to a recent press item, "The Cleveland branch of the National Metal Trades Association is offering to co-operate with the Board of Education in the city of Cleveland in the establishment of trade schools. The association has asked the school officials to provide for the appointment of a committee representing the Builders' Exchange, the Chamber of Commerce, the United Trades and Labor Council, the Metal Trades Association, the Y. M. C. A., the Case School of Applied Science, and other institutions, with a view of discussing the adoption of the best curriculum for the new Cleveland Technical High school. The association states that there is a constantly growing scarcity of skilled labor in the various trades owing to the lack of education."

A press dispatch, dated Albany, Nov. 22, 1907, says, "Industrial education in the elementary schools with an eye to preparation for the industrial trades has been adopted as a policy by the educational authorities of the city of Albany. \* \* \* \* The Board of Education has asked, and the Board of Estimate has now allowed, an initial appropriation with which to make

a beginning in one school. The plan is to establish eventually several elementary industrial schools in various parts of the city with an industrial High school to crown the system.\*\*\*

The school in which the initial experiment is to be tried is already equipped. Woodworking is to be instituted first, with a cooking laboratory to aid in the teaching of cooking, principles of diet, home nursing and the like. Eventually this equipment will be augmented by apparatus for metal working, forging, molding and casting.

The courses in industrial training are to be elective to pupils 14 years old who have completed the fifth school year.

While shop work for boys and the domestic arts for girls will constitute the first industrial courses to be introduced, these are regarded as only the first steps in a comprehensive programme covering all of the leading industries of this section.

### **The Philadelphia Municipal Trade School.**

A resolution providing for a trade school was passed by the Board of Education in Philadelphia during the year 1906 and a building at corner Twelfth and Locust streets, formerly occupied as a public school, was converted and equipped with all the necessary appliances for practical administration and instruction. The several trades were kept entirely separate, with instructors of well known practical ability for each branch. The school opened in October, 1906, and so quickly did its reputation spread that in May, 1907, 481 young men were enrolled and receiving instruction in the various branches of trade. The following is a list of the thirteen classes now organized with the number of pupils in each class.

Plumbing, 45; pipe-fitting, 13; blacksmithing, 11; sheet metal work, 51; electrical construction, 126; bricklaying, 37; pattern-making, 28; house and sign painting, 33; architectural drawing, 34; mechanical drawing, 21; carpentry, 45; plastering, 33.

There are thirteen teachers, one to each class, besides five assistants for the larger classes. Prof. William Odenatt, mechanical engineer, is Superintendent. (From an article in *Domestic Engineering*, May 4, 1907.)

### **Decay of the Apprenticeship System.**

The Report of President Seabrook of the National Association of Master Sheet Metal Workers, read at the convention at Indianapolis, August, 1906, contains the following:

The old-time apprenticeship in the sheet metal trades, in most instances, has ceased for several years. In very few cases

is any attempt made to give an apprentice a knowledge of the sheet metal trade, nor has there been for quite a number of years. Instead of apprentices, a floating class called "helpers" has been employed. These go from one shop to another for a year or two and then class themselves as journeymen. Consequently there is and has been for some time a dearth of good mechanics. The employer is largely to blame for this condition. If the future is to have good mechanics there must be a proper training of the boy in the present day. The slipshod method of training that has been sown for several years past is being reaped today in slipshod mechanics. \* \* \* \* Very few cities report any effort being made for a systematic training. Boston frankly says it has no apprentices. Think of it! Where are the mechanics for Boston ten years hence to come from? Worcester, Mass., says there is not an apprentice in the place. Kalamazoo, Mich., says they don't stay long enough with one employer to learn anything. Pittsburg, Pa., uses the apprentice where he will make the most money for the employer. Findlay, Ohio, has none—too expensive. The lack of apprentices or of any effort for their proper training is the rule and not the exception.

### **President Roosevelt on Agricultural Schools.**

At a recent farmers' convention held in Syracuse, October 23, a letter from President Roosevelt to Mr. Stilwell, President of the Chamber, was read, in which are found the following paragraphs relating to agricultural education:

I am firmly convinced that most farmers' boys and girls should be educated through agricultural high schools and through the teaching of practical elementary agriculture in the rural common schools, so that when grown up they shall become farmers and farmers' wives.

Education should be towards and not away from the farm. There must be an organized effort to restore or create the highest social conditions in the country districts, and the farmers' organizations should be strengthened so that they may best tell for social and trade betterment.

The chief instrumentalities in bringing this about must be the farmers themselves, in whose hands the ultimate solution of the problem lies, and whose agents and employes the various organizations, State and Federal, are. The grange, the farmers' clubs, the horticultural and dairy associations can do much.

There must be help from without through the New York State Agricultural Department, the State agricultural colleges, the experiment stations, while the Chambers of Commerce and

like organizations in cities and towns should work to the same end.

### **National Society for the Promotion of Industrial Education.**

The National Society for the promotion of Industrial Education was organized in 1906. Dr. Henry S. Pritchett, President of the Massachusetts Institute of Technology, is President of the Society. The Board of Managers consists of twenty-seven men and women who are recognized leaders in educational and industrial matters. The Society has issued four pamphlet bulletins with the following titles:

No. 1. Proceedings of the Organization Meetings, Jan., 1907.

No. 2. A Selected Bibliography on Industrial Education, July, 1907.

No. 3. A Symposium on Industrial Education, Sept., 1907.

No. 2. Industrial Education for Women, Oct., 1907.

Copies of these bulletins may be obtained by addressing the Secretary, Charles R. Richards, Teachers' College, New York City.

Those interested should apply for membership in the Society, which costs only two dollars per annum.

State Committees of the Society for the Promotion of Industrial Education have been organized in most of the States. A meeting of the Society is to be held in the Art Institute, Chicago, January 23 to 25, 1908. The following subjects are announced for discussion:

1. Industrial Education as an Essential Factor in Our National Prosperity.

2. The Apprenticeship System as a Means of Promoting Industrial Efficiency.

3. The Place of the Trade School in Industrial Education.

4. The Wage Earner's Benefit from Industrial Education.

5. The True Ideal of a Public School System That Aims to Benefit All.

### **Trade Education in Germany.**

In an article on "The American and the German Peril," by Louis J. Magee, *Engineering Magazine*, 1906, he discusses the numerous and many sided systems of industrial education in Germany. The following extracts are important:

"The ten universities of the Empire, (called technical high schools), enrolling over 17,000 students, are in close touch with

and a great help to the industries. In several cases they cultivate special branches with regard to local interests. For instance, the school in Dresden has a course for the technic of dyeing. The Aix-la-Chapelle school has courses in mining and metallurgy. Danzig includes marine engineering, of course, though Berlin stands very high in that department. Karlsruhe has a forestry department; and Munich an agricultural course.

"A comparative novelty even for Germany is the "commercial high school," a high-class business institute for instruction in finance, trade, and the business side of industry. The very latest advance in this direction is the *Handels-Hochschule*, commercial "high school," (remembering that this word is equivalent to our "college" or "institute") to be opened next Autumn under the auspices of the Corporation of Berlin merchants. It will receive only those who have had their years of apprenticeship in actual business and who are able to pass the examinations of the "one year service army volunteer."

"It is not, however, so much in these two highest categories of education that we are likely to be surprised in our German observations, but rather in the bewildering list of middle and lower schools. The most wonderful thing about these is their ingenious adaptability to all hours of the day, to all ages, occupations, and grades of preparation. There are for instance scattered through Germany a number of private technical institutes (called *Technicum*) for those whose preparation does not fit them for higher engineering schools; especially for cases in which the earlier years had to be passed in shop work for self-support. Then, too, the cities are establishing new "technical middle-schools." It is everywhere evident that the Germans are no longer satisfied with a few hundreds of famous scholars, a few thousands of professional men—and then a drop almost down to the "three Rs." They are wisely grading off their material. They have many different standards as to what constitutes an educated man. Then they try for ninety-nine per cent. efficiency under whatever standard the subject may properly belong. Even housemaids, butlers, and chimney-sweeps may receive in special schools all the correct fundamental preparation for their humble careers. The fact that a boy or girl has left the common schools and taken employment, is by no means an indication that the school days are over; on the contrary, the day's occupation creates interest for the evening courses in the "continuation" schools. In some of the schools charges are made, others are free. Some are supported by the State, some by the city, others by employers' guilds in various branches of business; and others by private

funds. Some of the schools receive support from all these sources."

Mr. Magee gives the following list of schools in Berlin devoted to the industries, with the number of students attending them:

Municipal high continuation schools .....	16,420
(Among these latter 2,006 business, and 6,981 hand trade, apprentices.)	
These schools teach German, English, French, machine drawing, lettering, stenography, typewriting, commercial correspondence, book-keeping and allied branches, sewing-machine work, machine embroidery, tailoring, mending, ironing, cooking, etc.	
Various schools; for deaf and dumb, blind, orphans, etc.; also elementary training for Royal Theatre....	892
Two Municipal night trade schools .....	4,979
including day courses for painters, cabinet-makers, modellers in clay and wax, electro-wiremen, etc.	
Builders trade .....	255
Weaving school (107 <i>day</i> pupils and 239 <i>Sundays</i> and evenings .....	239
Cabinet-makers (1,028 being apprentices) .....	1,385
Specialist schools—for masons, carpenters, saddlers, painters, chimney-sweeps (79 pupils), barbers and hairdressers (540 pupils), glaziers, smiths, basket-makers, book binders, printers, gardeners, photographers, tailors, potters, plumbers, paper-hangers, wagon-makers, etc.....	4,903
Schools supported by guilds and associations, as, for instance, 6 commercial night schools established by the Corporation of Berlin Merchants; also schools for house servants, tailors, housekeeping, women's handiwork, sewing, etc.....	4,359
Total .....	39,516

For comparison with these figures we have the following:

Common schools and private lower schools .....	238,904
Gymnasias, and others corresponding to our higher grammar, and high schools and lowest college classes .....	23,302

It thus appears that the schools devoted to the industries have about 15 per cent. as many pupils as the lower common schools have and over 70 per cent. more attendance than the



gymnasia or high schools. If Syracuse were to be equipped with industrial schools in the same proportion as Berlin, our industrial schools would have an attendance 1 7-10 times as great as our high schools.

The chart on the following page is taken from "Charities and Commons," October 5, 1907.

### **Criticism of the German System. (W.K.)**

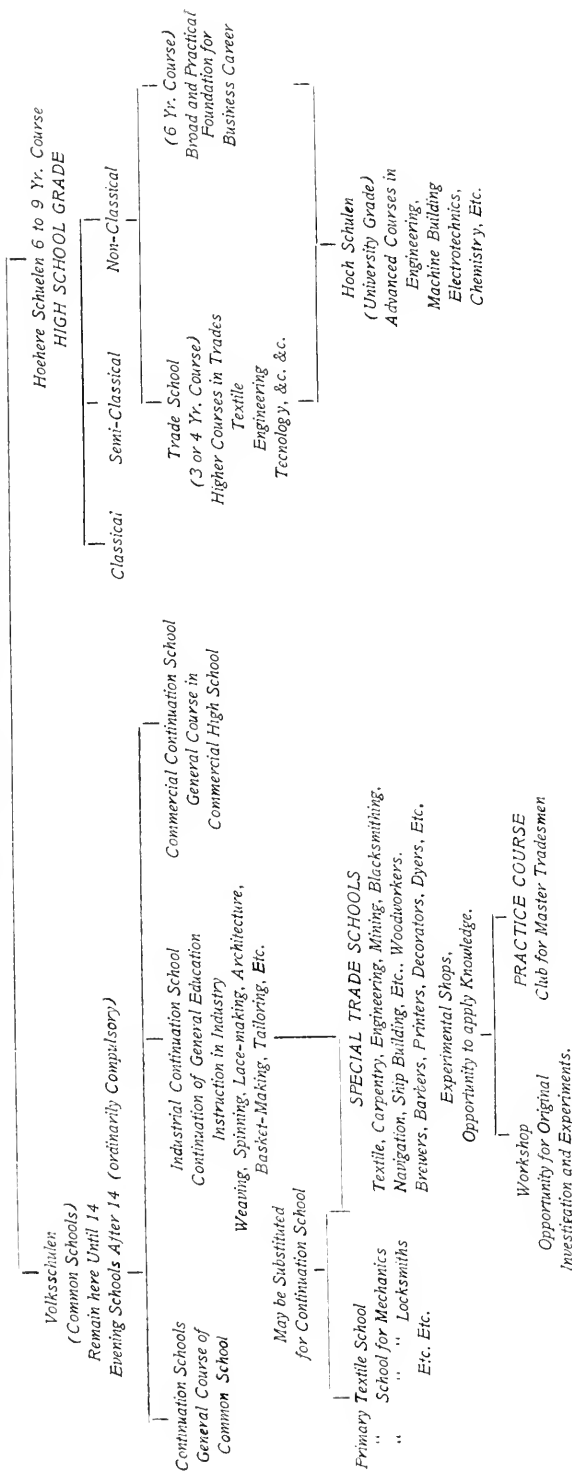
The chief objection likely to be made of the system shown in the diagram is that it makes a division of the pupils at 10 years of age. The American plan of giving the same kind of schooling to all children up to the age of 14 years is more in harmony with our democratic ideas. The German system revised to suit American ideas and needs would be something like the following:

Choice at 14 between	$\left\{ \begin{array}{l} \text{Work} \\ \text{High} \\ \text{School} \end{array} \right.$	$\left\{ \begin{array}{l} \text{with education continued in evening schools} \\ \text{with education continued in half time schools} \\ \text{Commercial or Industrial School.} \end{array} \right.$ $\left\{ \begin{array}{l} \text{General, leading to} \\ \text{Industrial High School} \\ \text{Technical College} \\ \text{Liberal Arts College} \end{array} \right.$
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# OUTLINE OF THE GERMAN SYSTEM OF INDUSTRIAL EDUCATION

*Compulsory Attendance at day school until 14  
Volksschulen (Common Schools) until 10*

*At 10 Years Pupil has choice between*



# A Proposed Half-Time School for Office Boys.

By William Kent

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Professor Sweet mentions briefly in his report that the manufacturers of Cincinnati have made an arrangement with the university in that city to have half-time apprentices. A description of the arrangement is found in Vol. 15 of the Proceedings of the Society for the Promotion of Engineering Education, just published.

"This course is so planned that the students taking it work alternate weeks in the engineering college of the university and at the manufacturing shops of the city. Each class is divided into two sections alternating with each other, so that when one class is at the university the other one is at the shops. In this way the shops are always fully manned, and thus the manufacturers suffer no loss and practically no inconvenience by the system. First, the entrance requirements for this course are precisely the same as for the regular four-year course. Secondly, the university instruction under the cooperative plan is just as complete, thorough, broad and cultural as the four-year course."

One day a few months ago the writer was in a large office building occupied by a large corporation in New York City, and while in company with the general manager, noticed in the main hall of each floor, near the elevators, two or three office boys sitting idly on benches, awaiting calls to run errands. In answer to his comment on the fact that the boys looked unusually bright and clean, the manager said, "Do you know, it is one of the most difficult problems that we have, to secure good office boys." "You ought not to be able to get them at all", said I. "Every one of those boys ought to be in school". "Yes", said he, "it is a great pity for them that they are not in school". These boys of thirteen to fifteen years of age were learning absolutely nothing of office work. Their whole time was employed in running errands inside or outside of the building or in sitting on the benches talking to each other while waiting for calls. They would hold their positions until they thought themselves too big to be errand boys and then

they would look for different jobs. But for what jobs were they fitted?

The Cincinnati idea of half-time or cooperative schools was in my mind at the time, and it suggested the possibility of the half-time school for office boys, a school in which half of the boys could go, either alternately morning and afternoon, or every other day, or every other week, as might be found expedient. A few large corporations might combine to establish a half-time business school to accommodate say fifty boys and employ 100 office boys half time, so that fifty would be working half a day, or half a week, or every other week, while the other fifty were at school. Thus half of the boys might go to school from 8 A. M. to noon and be at work from 1 to 6 P. M. and the other half of the boys would be at work from 8 A. M. to 1 P. M. and at school from 2 to 6 P. M. The course should be two years, say 14 to 16 years of age, and the subjects taught might be spelling, penmanship, commercial arithmetic, bookkeeping, filing and indexing, making out bills, type-writing, stenography, business forms and correspondence, tracing, blue printing, etc. The proposed school would be a step toward the solution of several problems. It would provide schooling for boys from 14 to 16 who are not now learning anything. It would train a most desirable class of office help, and it would provide plenty of good boys to run errands, for many boys would be willing to be errand boys for half-time during two years if they were getting an education in the meantime, who would not be errand boys for two full years if they got no education during that time.

Is not the idea worthy of consideration by some philanthropist who is interested in the problem of the education of the boys who are now leaving school at far too early an age?



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